No. 99-1426

Supreme Court, U.S.
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IN THE

Supreme Court of the United States

AMERICAN TRUCKING ASSOCIATIONS, INC., CHAMBER OF COMMERCE OF THE UNITED STATES, *et al.*,
Petitioners,

v.

CAROL M. BROWNER, ADMINISTRATOR OF THE ENVIRONMENTAL PROTECTION AGENCY, *et al.*,
Respondents.

On a Writ of Certiorari to the United States Court of Appeals For the District of Columbia Circuit

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APPENDIX A

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 97-1440

AMERICAN TRUCKING ASSOCIATIONS, INC., ET AL.,
PETITIONERS

v.

UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY, RESPONDENT

COMMONWEALTH OF MASSACHUSETTS, ET AL.,
INTERVENORS

Consolidated with
Nos. 97-1546, 97-1548, 97-1551, 97-1552, 97-1553,
97-1555, 97-1559, 97-1561, 97-1562, 97-1565, 97-1567,
97-1571, 97-1573, 97-1574, 97-1576, 97-1578, 97-1579,
97-1582, 97-1585, 97-1586, 97-1587, 97-1588, 97-1592,
97-1594, 97-1596, 97-1597, 97-1598

No. 97-1441

AMERICAN TRUCKING ASSOCIATIONS, INC., ET AL.,
PETITIONERS

v.

UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY, RESPONDENT

COMMONWEALTH OF MASSACHUSETTS, ET AL.,
INTERVENORS

Consolidated with
Nos. 97-1502, 97-1505, 97-1508, 97-1509, 97-1510,
97-1512, 97-1513, 97-1514, 97-1518, 97-1519, 97-1526,
97-1531, 97-1539, 97-1566, 97-1568, 97-1570, 97-1572,
97-1575, 97-1584, 97-1589, 97-1591, 97-1595, 97-1619

[Decided May 14, 1999]
[Argued December 17, 1998]

On Petitions for Review of an Order of the Environmental Protection Agency

BEFORE: WILLIAMS, GINSBURG and TATEL, *Circuit Judges*.

Opinion for the Court filed PER CURIAM.*

Separate opinion dissenting from Part I filed by *Circuit Judge* Tatel.

PER CURIAM:

Introduction

The Clean Air Act requires EPA to promulgate and periodically revise national ambient air quality standards ("NAAQS") for each air pollutant identified by the agency as meeting certain statutory criteria. See Clean Air Act §§ 108-09, 42 U.S.C. §§ 7408-09. For each pollutant, EPA sets a "primary standard"—a concentration level "requisite to protect the public health" with an "adequate margin of safety"—and a "secondary standard"—a level "requisite to protect the public welfare." *Id.* § 7409(b).

In July 1997 EPA issued final rules revising the primary and secondary NAAQS for particulate matter ("PM") and ozone. See National Ambient Air Quality Standards for Particulate Matter, 62 Fed. Reg. 38,652 (1997) ("PM Final Rule"); National Ambient Air Quality Standards for Ozone,

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* Judge Williams wrote Parts I and III.B; Judge Ginsburg wrote Parts II, III.A, and IV.D; Judge Tatel wrote Parts IV.A-C.

62 Fed. Reg. 38,856 (1997) ("Ozone Final Rule"). Numerous petitions for review have been filed for each rule.

In Part I we find that the construction of the Clean Air Act on which EPA relied in promulgating the NAAQS at issue here effects an unconstitutional delegation of legislative power. See U.S. Const. art. I, § 1 ("All legislative powers herein granted shall be vested in a Congress of the United States."). We remand the cases for EPA to develop a construction of the act that satisfies this constitutional requirement.

In Part II we reject the following claims: that § 109(d) of the Act allows EPA to consider costs; that EPA should have considered the environmental damage likely to result from the NAAQS' financial impact on the Abandoned Mine Reclamation Fund; that the NAAQS revisions violated the National Environmental Policy Act ("NEPA"), Unfunded Mandates Reform Act ("UMRA"), and Regulatory Flexibility Act ("RFA").

In Part III we decide two ozone-specific statutory issues, holding that the 1990 revisions to the Clean Air Act limit EPA's ability to enforce new ozone NAAQS and that EPA cannot ignore the possible health benefits of ozone.

Finally, in Part IV we resolve various challenges to the PM NAAQS. We agree with petitioners that EPA's choice of PM_{10} as the indicator for coarse particulate matter was arbitrary and capricious; we reject petitioners' claims that EPA must treat $PM_{2.5}$ as a "new pollutant," that EPA must identify a biological mechanism explaining PM's harmful effects, and that the Clean Air Act requires secondary

NAAQS to be set at levels that eliminate all adverse visibility effects.

The remaining issues cannot be resolved until such time as EPA may develop a constitutional construction of the act (and, if appropriate, modify the disputed NAAQS in accordance with that construction).

I. *Delegation*

Certain "Small Business Petitioners" argue in each case that EPA has construed §§ 108 & 109 of the Clean Air Act so loosely as to render them unconstitutional delegations of legislative power. We agree. Although the factors EPA uses in determining the degree of public health concern associated with different levels of ozone and PM are reasonable, EPA appears to have articulated no "intelligible principle" to channel its application of these factors; nor is one apparent from the statute. The nondelegation doctrine requires such a principle. See *J.W. Hampton, Jr. & Co. v. United States*, 276 U.S. 394, 409 (1928). Here it is as though Congress commanded EPA to select "big guys," and EPA announced that it would evaluate candidates based on height and weight, but revealed no cut-off point. The announcement, though sensible in what it does say, is fatally incomplete. The reasonable person responds, "How tall? How heavy?"

EPA regards ozone definitely, and PM likely, as non-threshold pollutants, i.e., ones that have some possibility of some adverse health impact (however slight) at any exposure level above zero. See Ozone Final Rule, 62 Fed. Reg. at 38,863/3 ("Nor does it seem possible, in the Administrator's judgment, to identify [an ozone concentration] level at which it can be concluded with confidence that no 'adverse' effects

are likely to occur."); National Ambient Air Quality Standards for Ozone and Particulate Matter, 61 Fed. Reg. 65,637, 65,651/3 (1996) (proposed rule) ("[T]he single most important factor influencing the uncertainty associated with the risk estimates is whether or not a threshold concentration exists below which PM-associated health risks are not likely to occur."). For convenience, we refer to both as non-threshold pollutants; the indeterminacy of PM's status does not affect EPA's analysis, or ours.

Thus the only concentration for ozone and PM that is utterly risk-free, in the sense of direct health impacts, is zero. Section 109(b)(1) says that EPA must set each standard at the level "requisite to protect the public health" with an "adequate margin of safety." 42 U.S.C. § 7409(b)(1). These are also the criteria by which EPA must determine whether a revision to existing NAAQS is appropriate. See 42 U.S.C. § 7409(d)(1) (EPA shall "promulgate such new standards as may be appropriate in accordance with . . . [§ 7409(b)]"); see also *infra* Part II.A. For EPA to pick any non-zero level it must explain the degree of imperfection permitted. The factors that EPA has elected to examine for this purpose in themselves pose no inherent nondelegation problem. But what EPA lacks is any determinate criterion for drawing lines. It has failed to state intelligibly how much is too much.

We begin with the criteria EPA has announced for assessing health effects in setting the NAAQS for non-threshold pollutants.[1] They are "the nature and severity of the

[1] Technically, EPA describes the criteria as used only for setting the "adequate margin of safety." There might be thought to be a separate step in which EPA determines what standard would protect public health *without* any margin of safety, and that step might be governed by different

health effects involved, the size of the sensitive population(s) at risk, the types of health information available, and the kind and degree of uncertainties that must be addressed." Ozone Final Rule, 62 Fed. Reg. at 38,883/2; EPA, "Review of the National Ambient Air Quality Standards for Particulate Matter: Policy Assessment of Scientific and Technical Information: OAQPS Staff Paper," at II-2 (July 1996) ("PM Staff Paper") (listing same factors). Although these criteria, so stated, are a bit vague, they do focus the inquiry on pollution's effects on public health. And most of the vagueness in the abstract formulation melts away as EPA applies the criteria: EPA basically considers severity of effect, certainty of effect, and size of population affected. These criteria, long ago approved by the judiciary, see *Lead Industries Ass'n v. EPA*, 647 F.2d 1130, 1161 (D.C. Cir. 1980) ("*Lead Industries*"), do not themselves speak to the issue of degree.

Read in light of these factors, EPA's explanations for its decisions amount to assertions that a less stringent standard would allow the relevant pollutant to inflict a greater quantum of harm on public health, and that a more stringent standard would result in less harm. Such arguments only support the intuitive proposition that more pollution will not benefit public health, not that keeping pollution at or below any particular level is "requisite" or not requisite to "protect the public health" with an "adequate margin of safety," the formula set out by § 109(b)(1).

criteria. But EPA did not use such a process, and it need not. See *NRDC v. EPA*, 902 F.2d 963, 973 (D.C. Cir. 1990). Thus, the criteria mentioned in the text govern the whole standard-setting process.

Consider EPA's defense of the 0.08 ppm level of the ozone NAAQS. EPA explains that its choice is superior to retaining the existing level, 0.09 ppm, because more people are exposed to more serious effects at 0.09 than at 0.08. See Ozone Final Rule, 62 Fed. Reg. at 38,868/1. In defending the decision not to go down to 0.07, EPA never contradicts the intuitive proposition, confirmed by data in its Staff Paper, that reducing the standard to that level would bring about comparable changes. See EPA, "Review of National Ambient Air Quality Standards for Ozone: Assessment of Scientific and Technical Information: OAQPS Staff Paper," at 156 (June 1996) ("Ozone Staff Paper"). Instead, it gives three other reasons. The principal substantive one is based on the criteria just discussed:

> The most certain O_3-related effects, while judged to be adverse, are transient and reversible (particularly at O_3 exposures below 0.08 ppm), and the more serious effects with greater immediate and potential long-term impacts on health are less certain, both as to the percentage of individuals exposed to various concentrations who are likely to experience such effects and as to the long-term medical significance of these effects.

Ozone Final Rule, 62 Fed. Reg. at 38,868/2.

In other words, effects are less certain and less severe at lower levels of exposure. This seems to be nothing more than a statement that lower exposure levels are associated with lower risk to public health. The dissent argues that in setting the standard at 0.08, EPA relied on evidence that health effects occurring below that level are "transient and reversible," Dissent at 5, evidently assuming that those at higher levels are not. But the EPA language quoted above

does not make the categorical distinction the dissent says it does, and it is far from apparent that any health effects existing above the level are permanent or irreversible.

In addition to the assertion quoted above, EPA cited the consensus of the Clean Air Scientific Advisory Committee ("CASAC") that the standard should not be set below 0.08. That body gave no specific reasons for its recommendations, so the appeal to its authority, also made in defense of other standards in the PM Final Rule, see PM Final Rule, 62 Fed. Reg. at 38,677/2 (daily fine PM standard); *id.* at 38,678/3 (annual coarse PM standard); *id.* at 38,679/1 (daily coarse PM standard), adds no enlightenment. The dissent stresses the undisputed eminence of CASAC's members, Dissent at 4, but the question whether EPA acted pursuant to lawfully delegated authority is not a scientific one. Nothing in what CASAC says helps us discern an intelligible principle derived by EPA from the Clean Air Act.

Finally, EPA argued that a 0.07 standard would be "closer to peak background levels that infrequently occur in some areas due to nonanthropogenic sources of O_3 precursors, and thus more likely to be inappropriately targeted in some areas on such sources." Ozone Final Rule, 62 Fed. Reg. at 38,868/3. But a 0.08 level, of course, is also *closer* to these peak levels than 0.09. The dissent notes that a single background observation fell between 0.07 and 0.08, and says that EPA's decision "ensured that if a region surpasses the ozone standard, it will do so because of controllable human activity, not uncontrollable natural levels of ozone." Dissent at 6. EPA's language, coupled with the data on background ozone levels, may add up to a backhanded way of saying that, given the national character of the NAAQS, it is

inappropriate to set a standard below a level that can be achieved throughout the country without action affirmatively *extracting* chemicals from nature. That may well be a sound reading of the statute, but EPA has not explicitly adopted it.

EPA frequently defends a decision not to set a standard at a lower level on the basis that there is greater uncertainty that health effects exist at lower levels than the level of the standard. See Ozone Final Rule, 62 Fed. Reg. at 38,868/2; PM Final Rule, 62 Fed. Reg. at 38,676/3 (annual fine PM standard); *id.* at 38,677/2 (daily fine PM standard). And such an argument is likely implicit in its defense of the coarse PM standards. See PM Final Rule, 62 Fed. Reg. at 38,678/3-79/1. The dissent's defense of the fine particulate matter standard cites exactly such a justification. See Dissent at 6 ("The Agency explained that 'there is generally *greatest statistical confidence* in observed associations . . . for levels at and above the mean concentration [in certain studies]'") (emphasis added in dissent). But the increasing-uncertainty argument is helpful only if some principle reveals how much uncertainty is too much. None does.

The arguments EPA offers here show only that EPA is applying the stated factors and that larger public health harms (including increased probability of such harms) are, as expected, associated with higher pollutant concentrations. The principle EPA invokes for each increment in stringency (such as for adopting the annual coarse particulate matter standard that it chose here)—that it is "possible, but not certain" that health effects exist at that level, see PM Final Rule, 62 Fed. Reg. at 38,678/3[2]—could as easily, for any

[2] EPA did cite qualitative evidence for further support for its annual standard, and argued that the evidence "does not provide evidence of

non-threshold pollutant, justify a standard of zero. The same indeterminacy prevails in EPA's decisions *not* to pick a still more stringent level. For example, EPA's reasons for not lowering the ozone standard from 0.08 to 0.07 ppm—that "the more serious effects . . . are less certain" at the lower levels and that the lower levels are "closer to peak background levels," see Ozone Final Rule, 62 Fed. Reg. at 38,868/2—could also be employed to justify a refusal to reduce levels below those associated with London's "Killer Fog" of 1952. In that calamity, very high PM levels (up to 2,500 $\mu g/m^3$) are believed to have led to 4,000 excess deaths in a week.[3] Thus, the agency rightly recognizes that the question is one of degree, but offers no intelligible principle by which to identify a stopping point.

The latitude EPA claims here seems even broader than that OSHA asserted in *International Union, UAW v. OSHA* ("*Lockout/Tagout I*"), 938 F.2d 1310, 1317 (D.C. Cir. 1991), which was to set a standard that would reduce a substantial risk and that was not infeasible. In that case, OSHA thought itself free either to "do nothing at all" or to "require precautions that take the industry to the brink of ruin," with "all positions in between . . . evidently equally valid." *Id.* Here, EPA's freedom of movement between the poles is equally unconstrained, but the poles are even farther apart—

effects below the range of 40-50 $\mu g/m^3$," the standard level. PM Final Rule, 62 Fed. Reg. at 38,678/3. The referenced document, however, bears no indication that the qualitative evidence demonstrates effects *at* the level of the standard, either. See EPA, "Air Quality Criteria for Particulate Matter," at 13-79 (April 1996).

[3] See W.P.D. Logan, "Mortality in the London Fog Incident, 1952," The Lancet, Feb. 4, 1953, at 336-38.

the maximum stringency would send industry not just to the brink of ruin but hurtling over it, while the minimum stringency may be close to doing nothing at all.

In *Lockout/Tagout I* certain special conditions that have justified an exceptionally relaxed application of the nondelegation doctrine were absent, *id.* at 1317-18, and they are equally absent here. The standards in question affect the whole economy, requiring a "more precise" delegation than would otherwise be the case, see *A.L.A. Schechter Poultry Corp. v. United States*, 295 U.S. 495, 553 (1935). No "special theories" justifying vague delegation such as the war powers of the President or the sovereign attributes of the delegatee have been or could be asserted. Nor is there some inherent characteristic of the field that bars development of a far more determinate basis for decision. (This is not to deny that there are difficulties; we consider some below.)

EPA cites prior decisions of this Court holding that when there is uncertainty about the health effects of concentrations of a particular pollutant within a particular range, EPA may use its discretion to make the "policy judgment" to set the standards at one point within the relevant range rather than another. *NRDC v. EPA*, 902 F.2d 962, 969 (D.C. Cir. 1990); *American Petroleum Inst. v. Costle*, 665 F.2d 1176, 1185 (D.C. Cir. 1981); *Lead Industries*, 647 F.2d at 1161 (D.C. Cir. 1980). We agree. But none of those panels addressed the claim of undue delegation that we face here, and accordingly had no occasion to ask EPA for coherence (for a "principle," to use the classic term) in making its "policy judgment." The latter phrase is not, after all, a self-sufficient justification for every refusal to define limits.

It was suggested at oral argument that EPA's vision of its discretion in application of § 109(b)(1) is no broader than that asserted by OSHA after a remand by this court and *upheld* by this court in *International Union, UAW v. OSHA* ("*Lockout/Tagout II*"), 37 F.3d 665 (D.C. Cir. 1994). But there, in fact, OSHA allowed itself to set only standards falling somewhere between maximum feasible stringency and some "moderate" departure from that level. *Id.* at 669. As our prior discussion should have indicated, here EPA's formulation of its policy judgment leaves it free to pick any point between zero and a hair below the concentrations yielding London's Killer Fog.

The dissent argues that a nondelegation challenge similar to this one was rejected in *South Terminal Corp. v. EPA*, 504 F.2d 646 (1st Cir. 1974), and cites that case's language that "the rationality of the means can be tested against goals capable of fairly precise definition in the language of science," *id.* at 677. See Dissent at 2. But the action challenged in *South Terminal* was EPA's adoption of a plan for ending or preventing violations in Boston of already-established NAAQS, not its promulgation of the NAAQS themselves. Thus, it seems likely that the "means" were the plan's provisions—e.g., a prohibition on most new parking in the city, see 504 F.2d at 671, and the "fairly precise[ly] defin[ed]" goals were the NAAQS themselves.

Where (as here) statutory language and an existing agency interpretation involve an unconstitutional delegation of power, but an interpretation without the constitutional weakness is or may be available, our response is not to strike down the statute but to give the agency an opportunity to extract a determinate standard on its own. *Lockout/Tagout I*,

938 F.2d at 1313. Doing so serves at least two of three basic rationales for the nondelegation doctrine. If the agency develops determinate, binding standards for itself, it is less likely to exercise the delegated authority arbitrarily. See *Amalgamated Meat Cutters v. Connally*, 337 F. Supp. 737, 758-59 (D.D.C. 1971) (Leventhal, J., for three-judge panel). And such standards enhance the likelihood that meaningful judicial review will prove feasible. See *id.* at 759. A remand of this sort of course does not serve the third key function of non-delegation doctrine, to "ensure[ ] to the extent consistent with orderly governmental administration that important choices of social policy are made by Congress, the branch of our Government most responsive to the popular will," *Industrial Union Dep't, AFL-CIO v. American Petroleum Inst.*, 448 U.S. 607, 685 (1980) ("*Benzene*") (Rehnquist, J., concurring). The agency will make the fundamental policy choices. But the remand does ensure that the courts not hold unconstitutional a statute that an agency, with the application of its special expertise, could salvage. In any event, we do not read current Supreme Court cases as applying the strong form of the nondelegation doctrine voiced in Justice Rehnquist's concurrence. See *Mistretta v. United States*, 488 U.S. 361, 377-79 (1989).

What sorts of "intelligible principles" might EPA adopt? Cost-benefit analysis, mentioned as a possibility in *Lockout/Tagout I*, 938 F.2d at 1319-21, is not available under decisions of this court. Our cases read § 109(b)(1) as barring EPA from considering any factor other than "health effects relating to pollutants in the air." *NRDC*, 902 F.2d at 973; see also *Lead Industries*, 647 F.2d at 1148; *American Lung Ass'n v. EPA*, 134 F.3d 388, 389 (D.C. Cir. 1998); *American Petroleum Inst.*, 665 F.2d at 1185 (echoing the same themes).

In theory, EPA could make its criterion the eradication of any hint of direct health risk. This approach is certainly determinate enough, but it appears that it would require the agency to set the permissible levels of both pollutants here at zero. No party here appears to advocate this solution, and EPA appears to show no inclination to adopt it.[4]

EPA's past behavior suggests some readiness to adopt standards that leave non-zero residual risk. For example, it has employed commonly used clinical criteria to determine what qualifies as an adverse health effect. See Ozone Staff Paper at 59-60 (using American Thoracic Society standards to determine threshold for "adverse health effect" from ozone). On the issue of likelihood, for some purposes it might be appropriate to use standards drawn from other areas of the law, such as the familiar "more probable than not" criterion.

Of course a one-size-fits-all criterion of probability would make little sense. There is no reason why the same

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[4] A zero-risk policy might seem to imply de-industrialization, but in fact even that seems inadequate to the task (and even if the calculus is confined to direct risks from pollutants, as opposed to risks from the concomitant poverty). First, PM (at least) results from almost all combustion, so only total prohibition of fire or universal application of some heretofore unknown control technology would reduce manmade emissions to zero. See PM Staff Paper at IV-1. Second, the combustion associated with pastoral life appears to be rather deadly. See World Bank, *World Development Report 1992: Development and the Environment* 52 (1992) (noting that "biomass" fuels (i.e., wood, straw, or dung) are often the only fuels that "poor households, mostly in rural areas" can obtain or afford, and that indoor smoke from biomass burning "contributes to acute respiratory infections that cause an estimated 4 million deaths annually among infants and children.").

probability should govern assessments of a risk of thousands of deaths as against risks of a handful of people suffering momentary shortness of breath. More generally, all the relevant variables seem to range continuously from high to low: the possible effects of pollutants vary from death to trivialities, and the size of the affected population, the probability of an effect, and the associated uncertainty range from "large" numbers of persons with point estimates of high probability, to small numbers and vague ranges of probability. This does not seem insurmountable. Everyday life compels us all to make decisions balancing remote but severe harms against a probability distribution of benefits; people decide whether to proceed with an operation that carries a 1/1000 possibility of death, and (simplifying) a 90% chance of cure and a 10% chance of no effect, and a certainty of some short-term pain and nuisance. To be sure, all that requires is a go/no-go decision, while a serious effort at coherence under § 109(b)(1) would need to be more comprehensive. For example, a range of ailments short of death might need to be assigned weights. Nonetheless, an agency wielding the power over American life possessed by EPA should be capable of developing the rough equivalent of a generic unit of harm that takes into account population affected, severity and probability. Possible building blocks for such a principled structure might be found in the approach Oregon used in devising its health plan for the poor. In determining what conditions would be eligible for treatment under its version of Medicaid, Oregon ranked treatments by the amount of improvement in "Quality-Adjusted Life Years" provided by each treatment, divided by the cost of the treatment.[5] Here, of course, EPA may not consider cost, and

[5] The "quality" of various health states was determined by poll, and

medical professionals determined the probabilities and durations of various health states with and without the treatment in question.

Oregon was twice forced to revise its system because the United States Department of Health & Human Services determined that the original proposal and a revision violated the Americans with Disabilities Act, 42 U.S.C. §§ 12101-12213. The reason given for this determination was that both versions undervalued the lives of persons with disabilities: The original plan measured quality of life according to the attitudes of the general population rather than the attitudes of persons with disabilities. See HHS, "Analysis Under the Americans with Disabilities Act ('ADA') of the Oregon Reform Demonstration" (Aug. 3, 1992), reprinted in 9 Issues in L. & Med. 397, 410, 410 (1994). The revised plan ranked treatments leaving the patient in a "symptomatic" state lower than those leaving the patient asymptomatic, and certain disabling conditions were considered "symptoms." See Letter from Timothy B. Flanagan, Assistant Attorney General, to Susan K. Zagame, Acting General Counsel, HHS (Jan. 19, 1993), reprinted in 9 Issues in L. & Med. 397, 418, 421 (1994). The Department's determination was extensively criticized when issued. See Maxwell J. Mehlman et al., "When Do Health Care Decisions Discriminate Against Persons with Disabilities?" 22 J. Of Health Politics, Policy & L. 1385, 1390 (1997) (HHS's "decision provoked a storm of disbelief and denunciation").

We take no position on whether HHS's view was correct, or if the underlying norm also governs EPA's decisions under § 109(b)(1). An affirmative answer, however, would not seem to preclude use of some of Oregon's approach. The first step would be giving appropriate weight to the views of persons with disabilities. The second might be measuring the seriousness of a pollution-induced health effect by the *absolute* level of well-being that the effect brings about, not by the *decrease* in level that the effect causes. In other words, if the maximum well-being level is 100 and the average asthmatic whose asthma constitutes a disability has a well-being of 80 in the absence of air pollution (according to a measure that appropriately considers asthmatics' own assessments of their condition), then a response to air pollution that reduces the asthmatics' well-being to 70 could be counted as an effect of magnitude 30 (the difference from full health), rather than 10 (the difference from the level without the pollution). That approach would ensure that effects on

indeed may well find a completely different method for securing reasonable coherence. Alternatively, if EPA concludes that there is no principle available, it can so report to the Congress, along with such rationales as it has for the levels it chose, and seek legislation ratifying its choice.

We have discussed only the primary standards. Because the secondary standards are at least in part based on those, see Ozone Final Rule, 62 Fed. Reg. at 38,875/3-76/1; PM Final Rule, 62 Fed. Reg. at 38,680/3, we also remand the cases to the agency with regard to the secondary standards as well, for further consideration in light of this opinion.

II. *Other General Claims*

The petitioners and amici contend that the EPA erroneously failed to consider a host of factors in revising the PM and ozone NAAQS. We reject each of these claims in turn.

A. Consideration of Cost in Revising Standards

As this court long ago made clear, in setting NAAQS under § 109(b) of the Clean Air Act, the EPA is not permitted to consider the cost of implementing those standards. See *Lead Industries*, 647 F.2d at 1148 (D.C. Cir. 1980); see also *NRDC*, 902 F.2d at 973 (following *Lead Industries* in reviewing particulate matter NAAQS); *American Petroleum Inst.*, 665 F.2d at 1185 (same, in reviewing ozone NAAQS). The petitioners make four unsuccessful attempts to distinguish *Lead Industries* and its progeny.

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persons with disabilities were not underestimated, even in the broad sense of that term apparently adopted by HHS.

First, the petitioners claim that in *Lead Industries* we held only that the Clean Air Act does not compel the EPA to consider the costs of implementation in setting a NAAQS; on the contrary, we held that the Act precludes the EPA from doing so. See *Lead Industries*, 647 F.2d at 1148 ("the statute and its legislative history make clear that economic considerations play no part in the promulgation of [NAAQS]").

Second, that we decided *Lead Industries* prior to the Supreme Court's decision in *Chevron U.S.A. Inc. v. NRDC*, 467 U.S. 837 (1984) does not, as the petitioners suggest, require us to revisit the earlier case. The *Lead Industries* decision was made in *Chevron* step one terms, see *id.*, as the post-*Chevron* progeny of *Lead Industries* have made clear. See *NRDC*, 902 F.2d at 973 ("Consideration of costs . . . would be flatly inconsistent with the statute, legislative history and case law on this point"); *NRDC v. EPA*, 824 F.2d 1146, 1158-59 (D.C. Cir. 1987) (in banc) ("*Vinyl Chloride*") ("[S]tatute on its face does not allow consideration of technological or economic feasibility. . . . Congress considered the alternatives and chose to close down sources or even industries rather than to allow risks to health").

Third, though the petitioners are correct that in *Lead Industries* we interpreted § 109(b), which governs the setting of NAAQS, and not § 109(d), which governs the revising of NAAQS, we can discern no legally relevant difference in the two sections that would make *Lead Industries* inapplicable to § 109(d). Section 109(d)(1) directs the EPA to:

> complete a thorough review of the criteria published under section 7408 of this title and the [NAAQS] promulgated under this section and [to] make such

> revisions in such criteria and standards and promulgate such new standards as may be appropriate in accordance with section 7408 of this title and subsection (b) of this section.

42 U.S.C. § 7409(d)(1). The petitioners contend that consideration of costs is one pertinent factor in determining whether revision of a NAAQS is "appropriate," but this argument ignores the clause immediately following "appropriate," which incorporates § 109(b) and thereby affirmatively precludes consideration of costs in revising NAAQS. Section 108(b), 42 U.S.C. § 7408(b), does require the EPA to provide the States with information on the cost of implementing NAAQS, but the reference to § 108 does not permit consideration of costs in setting NAAQS because it clearly relates back to the requirement that the EPA "make. . . revisions in ["the criteria published under section 7408"] . . . as may be appropriate." And insofar as the air quality criteria do apply to the setting of NAAQS, they do so through § 109(b), which (again) precludes the consideration of costs and which is explicitly incorporated into § 109(d)(1). See *id.* § 7409(b)(1) (primary NAAQS to be "based on [the air quality] criteria" issued under § 108).

Fourth, the petitioners point to § 109(d)(2), which creates the CASAC and requires it to advise the EPA about, among other things, "any adverse public health, welfare, social, economic, or energy effects which may result from various strategies for attainment and maintenance of such [NAAQS]." *Id.* § 7409(d)(2)(C)(iv). Why, ask the petitioners, would the CASAC be required to advise the EPA about these matters if the EPA were not then supposed to consider its advice in the course of revising the NAAQS? As

above, however, the petitioners overlook that § 109(d)(1) directs the EPA to review and to revise, as appropriate, the air quality standards issued under § 108 as well as the NAAQS promulgated under § 109(b). The advice required in § 109(d)(2)(C)(iv) is pertinent only to the EPA's duty under § 108 to provide the States with control strategy information.

B. Environmental Consequences of Implementing NAAQS

The State Petitioners argue that the EPA erred in failing "to consider the environmental consequences resulting from the financial impact of the [revised $PM_{2.5}$ and ozone NAAQS] on the federal Abandoned Mine Reclamation Fund Act." This argument is squarely foreclosed by our decision in *NRDC*. In reviewing the EPA's previous revision of the PM NAAQS, we rejected the argument that the EPA "erred in refusing to consider the health consequences of unemployment in determining the primary [NAAQS] for particulate matter" and held that "[i]t is only *health effects relating to pollutants in the air* that EPA may consider." 902 F.2d at 972-73 (emphasis in original). Unlike the positive health benefits of ozone that we hold (in Part III.B, below) the EPA must consider, any detrimental health effects resulting from the financial impact upon the mine fund, like the health consequences of unemployment, are traceable to the cost of complying with the revised $PM_{2.5}$ and ozone NAAQS and not to the presence of those pollutants in the air.

C. The National Environmental Policy Act

In challenging both the revised $PM_{2.5}$ and ozone NAAQS, the State Petitioners also argue that the EPA failed to comply with certain requirements of the NEPA. The petitioners

recognize that the Congress has exempted all actions under the Clean Air Act, including the setting of NAAQS, from the central requirement of the NEPA, namely, the preparation of an Environmental Impact Statement. Compare 42 U.S.C. § 4332(2)(C)-(D) (agency must prepare EIS in all "major Federal actions significantly affecting the quality of the human environment"), with 15 U.S.C. § 793(c)(1) ("No action taken under the Clean Air Act shall be deemed a major Federal action significantly affecting the quality of the human environment within the meaning of the [NEPA]"). Nonetheless, they suggest that the EPA is required to complete the functional equivalent of an EIS and also to comply with other requirements in the NEPA, see 42 U.S.C. § 4332(2)(B), (E), (G). State Petitioners' PM Brief at 20; State Petitioners' Ozone Brief at 19. We reject each of these suggestions.

First, the State Petitioners contend that this court has "recognized that the '[CAA], properly construed, requires the functional equivalent of a NEPA impact statement,'" *id.* (quoting *Portland Cement Ass'n v. Ruckelshaus*, 486 F.2d 375, 384 (1973)). Our decision in *Portland Cement*, however, actually construed only "section 111 of the Clean Air Act." By replacing these words with "[CAA]" in their briefs, the petitioners misrepresent our interpretation of a single section of the Clean Air Act, dealing with emission standards for stationary sources, as an interpretation of the entire Act. Even if the petitioners were correct, however, *Portland Cement* predated, and is now superseded by, the statutory exemption in 15 U.S.C. § 793(c)(1), which the Congress added in 1974.

Second, the State Petitioners contend that a provision of the NEPA "requires that EPA weigh 'economic considerations.'" The section to which the petitioners refer reads as follows: "all agencies of the Federal Government shall . . . identify and develop methods and procedures . . . which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations." 42 U.S.C. § 4332(2)(B). Even if this section is properly read generally to require an agency to consider implementation costs, § 109(d)(1) specifically prohibits the EPA from doing so. And the NEPA provides that it shall not "in any way affect the specific statutory obligations of any Federal agency . . . to comply with criteria or standards of environmental quality." 42 U.S.C. § 4334(1). Therefore, § 4332(2)(B) cannot require the EPA to disregard the prohibition in § 109(d)(1) upon the consideration of costs in setting NAAQS.

The State Petitioners' remaining arguments—that the EPA failed to comply with two other sections of the NEPA—fare little better. Section 4332(2)(E) requires federal agencies to "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." As with § 4332(2)(B), insofar as § 4332(2)(E) can be read to require the EPA to consider the costs of implementing NAAQS when revising those standards, contrary to the prohibition in § 109(d)(1), § 4334(1) prevents it from having any effect.

If, on the other hand, § 4332(2)(E) is understood in the context of the Clean Air Act to require the EPA merely to

discuss implementation alternatives, then it, like the similar § 4332(2)(G) with which the petitioners also claim the EPA failed to comply, is the functional equivalent of § 108(b)(1). That section requires the EPA to provide the States with, among other things, "such data as are available on available technology and alternative methods of prevention and control of air pollution." As we recognize with regard to the requirement that the agency prepare an EIS, "[c]ompliance with NEPA's . . . requirement[s] has not been considered necessary when the agency's organic legislation mandates procedures for considering the environment that are 'functional equivalents' of the [NEPA's] process." *Izaak Walton League of Am. v. Marsh*, 655 F.2d 346, 367 n.51 (1981). The rationale for the functional equivalence doctrine is the well-established principle that a "general statutory rule usually does not govern unless there is no more specific rule." *Green v. Bock Laundry Mach. Co.*, 490 U.S. 504, 524 (1989); see also *Alabama ex rel. Siegelman v. EPA*, 911 F.2d 499, 504-05 (11th Cir. 1990) (citing cases). The NEPA is the general statute requiring agencies to consider environmental harms, whereas the Clean Air Act is the more specific and its equivalent provisions apply in place of those in the NEPA. See *Portland Cement*, 486 F.2d at 386 (finding functional equivalence when more specific statute strikes "workable balance between some of the advantages and disadvantages of full application of NEPA").

Our analysis of the petitioners' contentions leads us to conclude that nothing in the NEPA requires the EPA in setting NAAQS to consider or to discuss matters that the Clean Air Act does not already permit or require.

D. The Unfunded Mandates Reform Act

The State Petitioners in the particulate matter case and Congressman Bliley in the ozone case both contend that the EPA is required by the Unfunded Mandates Reform Act, 2 U.S.C. § 1501 *et seq.*, to prepare a Regulatory Impact Statement (RIS) when setting a NAAQS, see *id.* § 1532, and to choose the least burdensome from a range of alternative permissible NAAQS, see *id.* § 1535. Even if the petitioners and the amicus are correct regarding the interaction of the UMRA and the CAA—a point the EPA strongly contests—we can provide them with no relief. See *id.* § 1571(a)(3) ("[T]he inadequacy or failure to prepare [a RIS] . . . shall not be used as a basis for staying, enjoining, invalidating or otherwise affecting [an] agency rule"); *id.* § 1571(b) ("Except as provided in [§ 1571(a), which does not mention § 1535,]. . . any compliance or noncompliance with the provisions of this chapter . . . shall not be subject to judicial review; and no provision of this chapter shall be construed to [be] . . . enforceable by any person in any . . . judicial action").

The State Petitioners, recognizing the limitations upon judicial review in § 1571, contend that the EPA's failure to prepare a RIS can nonetheless render the NAAQS arbitrary and capricious, see 42 U.S.C. § 7607(d)(9), relying upon *Thompson v. Clark*, 741 F.2d 401 (D.C. Cir. 1984). In that case, we interpreted a statute that, like the UMRA, both specified that the RIS be included in the record for judicial review and precluded judicial review of an agency's compliance with the RIS requirement. We held that a "reviewing court will consider the contents of the [RIS], along with the rest of the record, in assessing not the agency's compliance with the [requirement to prepare the

RIS], but the validity of the rule under other provisions of law." *Id.* at 405. No information in a RIS, however, could lead us to conclude that the EPA improperly set the PM and ozone NAAQS; the only information such a statement would add to the rulemaking record for a NAAQS would pertain to the costs of implementation, see 2 U.S.C. § 1532(a), and the EPA is precluded from considering those costs in setting a NAAQS. Accordingly, the failure to prepare a RIS does not render the NAAQS arbitrary and capricious.

E. The Regulatory Flexibility Act

In both the ozone and particulate matter cases, the Small Business Petitioners argue that the EPA improperly certified that the revised NAAQS would not have a significant impact upon a substantial number of small entities. The Regulatory Flexibility Act, 5 U.S.C. § 601 *et seq.*, as amended in 1996 by the Small Business Regulatory Enforcement Fairness Act, Pub. L. No. 104-121, tit. II, 110 Stat. 857-74 ("SBREFA"), requires an agency, when engaging in notice and comment rulemaking, to "prepare and make available for public comment an initial regulatory flexibility analysis. . . . [that] describe[s] the impact of the proposed rule on small entities," 5 U.S.C. § 603(a), including small businesses, small organizations, and small governmental jurisdictions, see *id.* § 601(6). When promulgating a final rule, an agency must describe "the steps . . . taken to minimize the significant economic impact on small entities." *Id.* § 604(a)(5). According to the petitioners, if the EPA had complied with the RFA, it would likely have promulgated less stringent PM and ozone NAAQS than those actually chosen, which would have reduced the burden upon small entities.

A regulatory flexibility analysis is not required, however, if the agency "certifies that the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities." *Id.* § 605(b). Further, the SBREFA made no change in the requirement that a regulatory flexibility analysis conducted pursuant to the RFA include estimates of "the number of small entities to which the proposed rule will apply" and of "the classes of small entities which will be subject to the requirement." 5 U.S.C. § 603(b)(3)-(4). We have consistently interpreted the RFA, based upon these sections, to impose no obligation upon an agency "to conduct a small entity impact analysis of effects on entities which it does not regulate." *Motor & Equip. Mfrs. Ass'n v. Nichols*, 142 F.3d 449, 467 & n.18 (1998).

The EPA certified that its revised NAAQS will "not have a significant economic impact on small entities within the meaning of the RFA." PM Final Rule, 62 Fed. Reg. at 38,702/2; Ozone Final Rule, 62 Fed. Reg. at 38,887/2-3. According to the EPA, the NAAQS themselves impose no regulations upon small entities. Instead, the several States regulate small entities through the state implementation plans (SIPs) that they are required by the Clean Air Act to develop. See 42 U.S.C. § 7410. Because the NAAQS therefore regulate small entities only indirectly—that is, insofar as they affect the planning decisions of the States—the EPA concluded that small entities are not "subject to the proposed regulation." See *Mid-Tex Elec. Coop., Inc. v. FERC*, 773 F.2d 327, 342 (D.C. Cir. 1985); see also *id.* at 343 ("Congress did not intend to require that every agency consider every indirect effect that any regulation might have on small businesses in any stratum of the national economy.").

The EPA's description of the relationship between NAAQS, SIPs, and small entities strikes us as incontestable. The States have broad discretion in determining the manner in which they will achieve compliance with the NAAQS. The EPA "is *required* to approve a state plan which provides for the timely attainment and subsequent maintenance of ambient air standards" and cannot reject a SIP based upon its view of "the wisdom of a State's choices of emission limitations," *Train v. NRDC*, 421 U.S. 60, 79 (1975) (emphasis in original), or of the technological infeasibility of the plan. See *Union Elec. Co. v. EPA*, 427 U.S. 246, 265 (1976). Therefore, a State may, if it chooses, avoid imposing upon small entities any of the burdens of complying with a revised NAAQS. Only if a State does not submit a SIP that complies with § 110, 42 U.S.C. § 7410, must the EPA adopt an implementation plan of its own, which would require the EPA to decide what burdens small entities should bear. The agency has stated, however, that it will do a regulatory flexibility analysis before adopting an implementation plan of its own, as it did in 1994 when proposing such a plan for Los Angeles. See Ozone Final Rule, 62 Fed. Reg. at 38,891/1; PM Final Rule, 62 Fed. Reg. at 38,705/3.

The responses of the Small Business Petitioners do not persuade us to reject the EPA's argument or to deviate from our holdings in *Mid-Tex* and its progeny. First, the Small Business Petitioners contend that we must defer to the Small Business Administration's interpretation of the Act, as expressed in a letter to the EPA from the SBA's Chief Counsel for Advocacy, that the NAAQS do impose requirements upon small entities. The SBA, however, neither administers nor has any policymaking role under the RFA; at most its role is advisory. See, e.g., 5 U.S.C. §§ 601(3),

602(b), 603(a), 605(b), 609(b)(1), 612. Therefore, we do not defer to the SBA's interpretation of the RFA. See *Scheduled Airlines Traffic Offices, Inc. v. Department of Defense*, 87 F.3d 1356, 1361 (D.C. Cir. 1996) (no *Chevron* deference owed to agency interpretation of statute it does not administer). Nor do we defer to the EPA's interpretation of the RFA, for it does not administer the Act either. We do, however, find the EPA's interpretation of the statute persuasive.

Second, the Small Business Petitioners argue that the EPA cannot claim both that the NAAQS will have no effect upon small entities and that it will have positive health effects. Clearly, however, the EPA can maintain that the NAAQS will have health effects because the Clean Air Act empowers the agency to ensure that such benefits accrue; and it can maintain that the NAAQS will not directly affect small entities because it has no authority (short of imposing its own implementation plan upon a non-complying state) to impose any burdens upon such entities.

Third, the Small Business Petitioners attempt to distinguish the possible effects upon small entities in this case from the indirect effects that, as we found in *Mid-Tex*, are not within the contemplation of the RFA. But *Mid-Tex* is not so easily distinguished. The petitioners in that case argued that the RFA required the FERC to consider economic effects not only upon regulated industries but also upon the small entities that are their wholesale customers, even though the customers were not directly regulated by the FERC. We rejected that argument, finding a "clear indication" in the language of § 603 that the RFA is "limited to small entities subject to the proposed regulation." *Mid-Tex*, 773 F.2d at

342; see also *Motor & Equip. Mfrs. Ass'n*, 142 F.3d at 467 n.18 ("The RFA itself distinguishes between small entities subject to an agency rule, to which its requirements apply, and those not subject to the rule, to which the requirements do not apply."); *United Distribution Cos. v. FERC*, 88 F.3d 1105, 1170 (1996) (regulatory flexibility analysis provision applies only to "small entities *that are subject to the requirements of the rule*") (emphasis in original). That the Clean Air Act requires the States to submit SIPs that will achieve compliance with the NAAQS does not, in view of the States' nearly complete discretion to determine which entities will bear the burdens of a revised NAAQS, make such small entities as the SIPs may regulate any more subject to the EPA's regulation than were the wholesalers in *Mid-Tex* subject to regulation by the FERC.

Finally, the Small Business Petitioners suggest that the Congress in enacting the SBREFA overruled our prior interpretation of the RFA in *Mid-Tex* and its progeny. The SBREFA made a number of changes in the RFA, but it did not change anything in § 603 upon which we relied in *Mid-Tex*. And although the Congress made a slight modification in § 605(b), we do not understand it to alter our analysis in *Mid-Tex*. Prior to 1996, § 605(b) required an agency to provide "a succinct statement explaining the reasons" for its certification that the promulgated rule would not have a significant economic impact upon small entities. That section now requires "a statement providing the factual basis for such certification." Our decision in *Mid-Tex* contemplates that an agency may justify its certification under the RFA upon the "factual basis" that the rule does not directly regulate any small entities. Nothing in the change to § 605(b) suggests that basis for certification is no longer

permissible. (Indeed, the section of the statute amending § 605(b) is labeled "Technical and Conforming Amendments," see SBREFA § 243, 110 Stat. at 866.) We therefore conclude that the EPA properly certified that its NAAQS would not have a significant impact upon a substantial number of small entities.

III. *Ozone*

A. Subpart 2 and the Revised Ozone Standard

In 1990 the Congress substantially revised the Clean Air Act by, among other things, adding specific enforcement provisions for carbon monoxide, particulate matter, sulfur oxides, nitrogen dioxide, lead, and as pertinent here, ozone. Previously, the Act required that all areas of the country not attaining the primary ozone standard, no matter how far from attainment, come into compliance "as expeditiously as practicable but not later than December 31, 1987." 42 U.S.C. § 7502 (1988). Many areas had not attained the primary ozone NAAQS by that date; some were still a long way from doing so. The Congress responded to the continued ozone problem by enacting a new enforcement scheme, which it codified as Subpart 2 of Part D of the Clean Air Act, 42 U.S.C. §§ 7511-7511f, redesignating the original provisions as Subpart 1.

Subpart 2 requires the EPA to classify nonattainment areas based upon their design value, which is a rough measure of whether an area complies with the 0.12 ppm, 1-hour primary ozone standard.[6] A table in Subpart 2, set out

[6] More specifically, the design value is the fourth-highest daily maximum ozone concentration in an area over three consecutive years for

here in the margin,[7] establishes classifications ranging from marginal to extreme, and provides an attainment date for each

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which there are sufficient data. If that value is less than or equal to 0.12 ppm, then an area will have only three expected values above that level and it will be in attainment with the ozone NAAQS. See EPA, The Clean Air Act Ozone Design Value Study: Final Report 1-1 to 1-22 (1994) (filed pursuant to 42 U.S.C. § 7511b(g), which required the EPA to conduct "a study of whether the [existing design value] methodology . . . provides a reasonable indicator of the ozone air quality of ozone nonattainment areas"; the EPA concluded it did).

[7] This table appears in Clean Air Act § 181(a)(1), 42 U.S.C. § 7511(a)(1):

TABLE 1

Area Class	Design value [ppm]	Primary standard attainment date
Marginal.....	0.121 up to 0.138	3 years after November 15, 1990
Moderate.....	0.138 up to 0.160	6 years after November 15, 1990
Serious	0.160 up to 0.180	9 years after November 15, 1990
Severe	0.180 up to 0.280	15 years after November 15, 1990
Extreme	0.280 and above	20 years after November 15, 1990

The Severe Area category is later subdivided, creating a sixth classification for ozone nonattainment areas. See *id.* § 7511(a)(2) ("Notwithstanding table 1, [for] a severe area with a 1988 ozone design value between 0.190 and 0.280 ppm, the attainment date shall be 17 years . . . after November 15, 1990").

class. See *id.* § 7511(a)(1)-(2). Subpart 2 also specifies, for each class of nonattainment areas, both measures that the States must take to reduce emissions of the chemicals that are precursors of ozone and information that the States must report to the EPA. See *id.* § 7511a. In short, Subpart 2 is the Congress's comprehensive plan for reducing ozone levels throughout the country.

The State and Non-State Petitioners, along with Congressman Bliley appearing as an amicus curiae, argue that Subpart 2 precludes the EPA from revising the primary and secondary ozone NAAQS. We reject this argument (in Part III.A.1) insofar as it pertains to the EPA's continued ability to promulgate a revised ozone NAAQS or to designate areas as not in attainment with a revised NAAQS. We agree (in Part III.A.2) with those petitioners, however, insofar as they maintain, based upon the text and structure of Subparts 1 and 2, that the EPA is precluded from enforcing a revised primary ozone NAAQS other than in accordance with the classifications, attainment dates, and control measures set out in Subpart 2. Further, we conclude (in Part III.A.3) that the EPA may not require a State to comply with a revised secondary ozone NAAQS in any area that has yet to attain the 0.12 ppm primary standard.

1. The EPA's Power to Revise the Ozone NAAQS and Designate Areas as Nonattainment

The 1990 amendments did not alter the section of the Clean Air Act that provides for setting and revising primary and secondary NAAQS. See 42 U.S.C. § 7409. The Administrator, therefore, still must "at five-year intervals [from December 31, 1980] . . . complete a thorough review of . . . the [NAAQS] promulgated under this section and . . .

make such revisions in such . . . standards . . . as may be appropriate." *Id.* § 7409(d)(1). The Second Circuit held that this section continues to "set[ ] forth a bright-line rule for agency action," *American Lung Ass'n v. Reilly*, 962 F.2d 258, 263 (1992), and we agree. Nothing in the Act modifies this "bright-line rule" or otherwise makes it inapplicable to revision of the ozone NAAQS.

To the extent that the 1990 amendments shed any light upon this question, they suggest that the EPA retains its authority to revise the ozone NAAQS. For example, if the EPA relaxes a NAAQS after enactment of the 1990 amendments, then "the Administrator shall . . . promulgate requirements applicable to all areas which have not attained that [relaxed] standard as of the date of such relaxation. . . . [which] shall provide for controls . . . not less stringent than the controls applicable to areas designated nonattainment before such relaxation." 42 U.S.C. § 7502(e). Although two other subsections of § 172 are expressly made inapplicable to the ozone regulations in Subpart 2, see *id.* § 7502(a)(1)(C), (a)(2)(D), this so-called anti-backsliding provision contains no such exemption. Accordingly, as the EPA notes, this section specifically contemplates that the agency may relax its ozone NAAQS and, therefore, necessarily implies that it retains the authority to revise that NAAQS. Tellingly, neither the petitioners nor the amicus reply to this point.

The petitioners and amicus raise two other arguments to support their position that the EPA cannot alter the ozone NAAQS without the approval of the Congress. We reject both in short order.

First, the Non-State Petitioners contend that Subpart 2 renders revision of the ozone NAAQS "inappropriate" within

the meaning of § 109(d)(1), which provides the EPA shall "make such revisions in such . . . standards . . . as may be appropriate." 42 U.S.C. § 7409(d)(1). This argument, however, pointedly ignores the text immediately following the word "appropriate," which specifies that appropriateness is to be determined "in accordance with section 7408 . . . and [§ 7409(b)]" (and which, as we read it, means exclusively in accord with those sections). See, e.g., *American Methyl Corp. v. EPA*, 749 F.2d 826, 835-36 (D.C. Cir. 1984). Because Subpart 2 is neither listed in § 109(d)(1) nor incorporated by reference in either § 108, *id.* § 7408, or § 109(b), it cannot render revision of the ozone NAAQS inappropriate.

Second, the State Petitioners and Congressman Bliley argue, based upon the classification table in § 181(a)(1), *id.* § 7511(a)(1), that Subpart 2 codified the 0.12 ppm ozone NAAQS and, therefore, only the Congress can promulgate a revised NAAQS. Yet not all areas designated nonattainment for ozone will have design values of 0.121 ppm or higher. In fact, this was true of areas designated nonattainment for ozone as a result of the 1990 amendments, see Ozone Final Rule, 62 Fed. Reg. at 38,884/3, at least in part because of the stringent criteria in the Clean Air Act for changing the designation of an area to attainment from nonattainment. See 42 U.S.C. § 7407(d)(3)(E)(iii) (redesignation permissible only if area's attainment of NAAQS "is due to permanent and enforceable reductions in emissions"). In short, although the numbers in the classification table are based upon the 0.12 ppm ozone NAAQS, they are neither equivalent to nor a codification of the NAAQS.

Not only does the EPA, as we conclude above, retain authority to promulgate a revised ozone NAAQS; the agency is still required, "in no case later than 2 years from the date of promulgation" of a revised NAAQS, to designate areas as attainment, nonattainment, or unclassifiable under that NAAQS. *Id.* § 7407(d)(1)(B). Although the 1990 amendments extended by roughly 18 months the maximum time between promulgation of a revised NAAQS and designation of nonattainment areas under that NAAQS, see 42 U.S.C. § 7407(d)(1)-(2) (1988), they made no substantive change in the EPA's authority to designate areas as nonattainment under a revised NAAQS. Therefore, we hold that the EPA retains the power to designate areas as nonattainment under a revised ozone NAAQS.

2. The EPA's Power to Enforce the Revised Ozone Standard

That the enactment of Subpart 2 does not alter the EPA's authority to revise the ozone NAAQS or to designate areas as nonattainment for ozone does not, however, compel the conclusion that Subpart 2 has no effect upon the EPA's authority to enforce a revised primary ozone NAAQS. (We consider the enforcement of secondary ozone NAAQS in Part III.A.3, below.) In fact, the text and structure of Subparts 1 and 2 suggest precisely the opposite conclusion. After designating an area as nonattainment under a NAAQS, the EPA normally looks to Subpart 1 for authority to "classify the area for the purpose of applying an attainment date." 42 U.S.C. § 7502(a)(1)-(2). The cited provisions, however, do not apply "with respect to nonattainment areas for which classifications [and attainment dates] are specifically

provided under other provisions of [Part D of Subchapter 1 of the Clean Air Act]." *Id.* § 7502(a)(1)(C), (a)(2)(D).

The EPA argues that Subpart 2 specifically provides classifications and attainment dates only for nonattainment designations under the 0.12 ppm ozone NAAQS. The State and Non-State Petitioners counter that Subpart 2 specifically provides classifications and dates for all areas designated nonattainment under any ozone NAAQS. We agree with the petitioners.

The pertinent provision of Subpart 2 reads as follows:

> (a) **Classification and attainment dates for 1989 nonattainment areas.** — (1) Each area designated nonattainment for ozone pursuant to section 7407(d) of this title shall be classified at the time of such designation, under table 1, by operation of law, as a Marginal Area, a Moderate Area, a Serious Area, a Severe Area, or an Extreme Area. . . .

Id. § 7511(a)(1). As the petitioners note, § 107(d), 42 U.S.C. § 7407(d), specifies three different times at which an area can be designated "nonattainment for ozone": immediately following enactment of the 1990 amendments, *id.* § 7407(d)(4); after the EPA revises the ozone NAAQS, *id.* § 7407(d)(1); and when an area that was in attainment, either when the Congress enacted the 1990 amendments or when the EPA promulgated a revised ozone NAAQS, later ceases to comply, *id.* § 7407(d)(3). The petitioners conclude from the general reference to § 107(d) that the classifications and attainment dates in Subpart 2 apply to areas designated under §§ 107(d)(1), (3), and (4). The EPA gamely responds that the reference to § 107(d) includes only subsection (4), but we do

not defer to the agency's interpretation because we find that the Congress has spoken on the "precise question at issue" and we "must give effect to the unambiguously expressed intent of Congress." *Chevron U.S.A. Inc.*, 467 U.S. 837, 842-43 & n.9 (1984). We canvass the two reasons that lead us to this conclusion before returning to the EPA's argument.

First, the reference to § 107(d) in § 181(a)(1) appears to have been purposeful and not the drafting error that the EPA's interpretation implies. The Congress considered but did not adopt bills that clearly would have limited the reach of Subpart 2 to nonattainment designations made immediately following enactment of the 1990 amendments. The Senate bill contained a version of Subpart 2 that classified only those areas designated nonattainment for ozone under its equivalent of § 107(d)(4). See S. 1630, 101st Cong. §§ 101, 107, reprinted in III Legislative History of the Clean Air Act Amendments of 1990, at 4124-25, 4195 [hereinafter 1990 Legislative History]. The version of Subpart 2 in the House bill, as originally introduced, similarly referred only to designations made under its equivalent of § 107(d)(4). See H.R. 3030, 101st Cong. §§ 101(a), 103, reprinted in II 1990 Legislative History, at 3748-49, 3795-96. The House committee, however, replaced the specific reference to what is now § 107(d)(4) with a general reference to § 107(d). See H.R. Rep. No. 101-490, at 3-6, 17 (1990), reprinted in II 1990 Legislative History, at 3027-30, 3041. The Conference committee then reported the text of the House bill rather than that of the Senate. See H.R. Rep. No. 101-952, at 335 (1990), reprinted in I 1990 Legislative History, at 1785.

Second, our conclusion that the Congress intentionally referred to § 107(d) as a whole is supported by a comparison of Subparts 1 and 2. The Congress enacted Subpart 2 because of the failure of the controls in Subpart 1 to bring areas into attainment with the 0.12 ppm standard in the allotted time. See H.R. Rep. No. 101-490, at 145-50, reprinted in II 1990 Legislative History, at 3169-74. Rather than continue treating all ozone nonattainment areas alike, the Congress allowed the various areas between 3 and 20 years to attain the ozone NAAQS, depending upon the extent of the area's ozone problem. See *id.* at 146-47 ("In 1977, Congress tried to waive [sic] a 'magic wand' and command that all nonattainment areas [for ozone] will meet the applicable [NAAQS]. . . . by December 31, 1987. . . . [That] date[ ] ha[s] come and gone and it is clear that . . . we had no 'magic' solutions."), reprinted in II 1990 Legislative History, at 3170-71. As the petitioners argue, because the 1990 amendments extended the time for nonattainment areas to comply with the 0.12 ppm ozone NAAQS, they must preclude the EPA from requiring areas to comply either more quickly or with a more stringent ozone NAAQS.

Subpart 1 requires compliance with a primary NAAQS "as expeditiously as practicable, but no later than 5 years from the date such area was designated nonattainment." 42 U.S.C. § 7502(a)(2)(A). All nonattainment areas would have until 2012 to comply with the revised ozone NAAQS if the EPA and the States were to take the full time authorized in Subpart 1 for making attainment designations and the EPA were to approve every possible extension for each area. See *id.* §§ 7407(d)(1)(A)-(B), 7502(a)(2)(A), (C). Such wide discretion is inconsistent, however, with Subpart 2, in which the Congress stripped the EPA of discretion to decide which

ozone nonattainment areas should receive more time to reach attainment (with two limited exceptions not relevant here, see *id.* § 7511(a)(4), (5)). Moreover, under § 181(a) of Subpart 2, Los Angeles, the nation's only Extreme Area, has until 2010 to attain the 0.12 ppm ozone NAAQS, and the possibility of extending that deadline until 2012. That Los Angeles should also have to attain a more stringent ozone standard by that same year, if not earlier, clearly runs counter to the comprehensive enforcement scheme enacted in Subpart 2.

The EPA offers two arguments against this interpretation of Subparts 1 and 2. First, the EPA contends that a recent statute confirms its power to designate nonattainment areas under the revised ozone standard. See Pub. L. No. 105-178, § 6103(a), 112 Stat. 465 (1998) (extending time to two years from one year for governor to submit proposed designation under 0.08 ppm ozone NAAQS). That statute also specifically states, however, that "[n]othing in section [ ] . . . 6103 shall be construed by the Administrator of Environmental Protection Agency or any court . . . to affect any pending litigation or to be a ratification of the ozone . . . standard[ ]." *Id.* § 6104. Further, even if the EPA were correct that § 6103 confirms the agency's power to designate areas under a revised ozone NAAQS, that power was never in doubt, as we concluded above. Indeed, § 6104 simply does not bear upon the question we address here: whether Subpart 1 or Subpart 2 provides the applicable enforcement mechanisms for an area designated nonattainment under a revised ozone NAAQS.

Second, the EPA argues that read in context the reference to § 107(d) in § 181(a)(1) relates only to designations made

under § 107(d)(4). Because the table in § 181(a)(1) classifies areas based upon a design value that roughly measures attainment of the 0.12 ppm ozone NAAQS, the EPA contends that the nonattainment designations referenced in § 181(a)(1) are only those designations made under the 0.12 ppm ozone NAAQS. This explanation, however, does not square with either the Congress's decision not to refer to § 107(d)(4) specifically or the long-term nature of the attainment scheme enacted in Subpart 2; on the EPA's interpretation, that scheme would have been stillborn had the EPA revised the ozone NAAQS immediately after the Congress enacted the 1990 amendments.

The EPA points next to § 181(b)(1), which specifies the attainment dates for areas that met the 0.12 ppm standard when the Congress enacted the 1990 amendments but that later cease to comply. That section, however, applies only to areas designated under § 107(d)(3) that previously were "designated attainment or unclassifiable for ozone under section [107(d)(4)]." That § 181(b)(1) provides special rules for such areas, but not for areas designated under § 107(d)(3) that had previously been designated attainment for ozone or unclassifiable under § 107(d)(1), does not support the EPA's argument that the phrase in § 181(a)(1) "designated nonattainment for ozone pursuant to section 107(d)" denotes only those designations made under § 107(d)(4). If anything, the specification of § 107(d)(4) in § 181(b)(1) makes its absence from § 181(a)(1) all the more striking.

The final bit of context to which the EPA points is the title of § 181(a): "Classification and attainment dates for 1989 nonattainment areas." Because the title specifies "1989 nonattainment areas," we are told, § 181(a) must refer only to

nonattainment designations made immediately after enactment of the 1990 amendments, that is, designations made under § 107(d)(4). Although "the title of a statute or section can aid in resolving an ambiguity in the legislation's text," *INS v. National Ctr. for Immigrants' Rights, Inc.*, 502 U.S. 183, 189 (1991), a title cannot be allowed to create an ambiguity in the first place. See *Maguire v. Commissioner of Internal Revenue*, 313 U.S. 1, 9 (1941) ("[T]he title of an act will not limit the plain meaning of the text."). The text of § 181(a) clearly encompasses nonattainment designations made under all subsections of § 107(d). There simply is no ambiguity in need of resolution by reference to the title of the section.

In sum, § 181(a) "specifically provide[s]" for classifications and attainment dates for areas designated nonattainment for ozone pursuant to § 107(d)(1). Accordingly, Subpart 2, not Subpart 1, provides the classifications and attainment dates for any areas designated nonattainment under a revised primary ozone NAAQS, see 42 U.S.C. § 7502(a)(1)(C), (a)(2)(D), and the EPA must enforce any revised primary ozone NAAQS under Subpart 2.

3. The Secondary Ozone NAAQS

The Non-State Petitioners briefly contend that our conclusion that Subpart 2 provides the classifications and attainment dates for areas designated nonattainment under a revised primary ozone NAAQS is equally applicable to the enforcement of a revised secondary ozone NAAQS. We find it impossible to conclude, however, that Subpart 2 "specifically provide[s]" for classifications and attainment dates for areas designated nonattainment with a revised secondary ozone NAAQS; § 181(a)(1) expressly refers only

to primary NAAQS and Subpart 2 not once mentions secondary NAAQS. Further, attainment dates in Subpart 1 for secondary standards are less stringent than for primary standards, making comparison with the more lenient dates in Subpart 2 less troubling. Compare *id.* § 7502(a)(2)(B) (attainment of secondary NAAQS "shall be . . . achieved as expeditiously as practicable after the date such area was designated nonattainment"), with *id.* § 7502(a)(2)(A) (attainment of primary NAAQS "shall be . . . achieved as expeditiously as practicable, but no later than 5 years from the date such area was designated nonattainment"). Nonetheless, we understand Subpart 2 to codify the Congress's judgment as to what is "as expeditiously as practicable" in reducing an area's level of ozone. Consequently, the EPA is precluded from requiring any steps toward compliance with a revised secondary ozone NAAQS prior to an area's attainment of the 0.12 ppm standard. In areas that meet the 0.12 ppm standard, however, Subpart 2 erects no bar to the EPA's requiring compliance with a revised secondary ozone NAAQS "as expeditiously as practicable."

B. Ozone's Health Benefits

Petitioners presented evidence that according to them shows the health benefits of tropospheric ozone as a shield from the harmful effects of the sun's ultraviolet rays—including cataracts and both melanoma and nonmelanoma skin cancers. In estimating the effects of ozone concentrations, EPA explicitly disregarded these alleged benefits.

EPA explained its decision first as a matter of statutory interpretation. Under the Clean Air Act, EPA's ambient

standards for any pollutant are to be "based on [the] criteria" that EPA has published for that pollutant. 42 U.S.C. § 7409(b)(1) & (2). The "criteria," in turn, are to "reflect the latest scientific knowledge useful in indicating the kind and extent of all identifiable effects on public health or welfare which may be expected from the presence of such pollutant in the ambient air, in varying quantities." *Id.* § 7408(a)(2). The reference to "all identifiable effects" would seem on its face to include beneficent effects.

EPA attempts to avoid this straightforward reading in several ways. First, it points to the term "such pollutant," arguing that the statute requires it to focus exclusively on the characteristics that make the substance a "pollutant." But the phrase "pollutant" is simply a label used to identify a substance to be listed and controlled by the statute. While it is perfectly true that a substance known to be utterly without adverse effects could not make it onto the list, this fact of nomenclature does not visibly manifest a congressional intent to banish consideration of whole classes of "identifiable effects."

EPA also relies on the fact that two of the three specified considerations under § 108(a)(2)'s general mandate refer to "adverse effect[s]":

> The criteria for an air pollutant, to the extent practicable, shall include information on—
>
> (A) those variable factors (including atmospheric conditions) which of themselves or in combination with other factors may alter the effects on public health or welfare of such air pollutant;

> (B) the types of air pollutants which, when present in the atmosphere, may interact with such pollutant to produce an *adverse* effect on public health or welfare; and
>
> (C) any known or anticipated *adverse* effects on welfare.

Id. § 7408(a)(2) (emphasis added). EPA's argument would be of uncertain force even if all three types of effects specifically required to be considered were spoken of as "adverse effects"; there is no reason to read "adverse" back into the "all identifiable effects" of § 108(a)(2). But as one of the three specified classes refers to "effects" unmodified, *id.* § 7408(a)(2)(A), we can reject EPA's argument without even reaching that issue. That Congress qualified "effects" in clauses (B) and (C) with "adverse" seems only to strengthen the supposition that in (A)—and in the general mandate—it intended to cover *all* health or welfare effects. Therefore if petitioners' contentions are right, clause (A) applies to ozone: the presence of ultraviolet radiation at various levels "alter[s] the effects [of ozone] on public health or welfare" by making them on the whole less malign—perhaps even beneficial.

EPA next argues that Title VI of the Clean Air Act, *id.* §§ 7671-7671q, which mandates certain measures to preserve *stratospheric* ozone, represents a complete consideration of ozone's beneficial role as a UV shield. Petitioners' claim, however, is that ground-level (tropospheric) ozone—the subject of this rule—has a UV-screening function independent of the ozone higher in the atmosphere. EPA points to nothing in the statute that purports to address tropospheric ozone.

Finally, EPA directs us towards legislative history from the 1970 and 1990 Clean Air Act Amendments. The "all

identifiable effects" language, however, dates to the 1967 Amendments. Legislative history from the 1970 and 1990 Congresses cannot be "an authoritative interpretation of what the [1967] statute meant," because it is "the function of the courts and not the Legislature, much less a Committee of one House of the Legislature, to say what an enacted statute means." *Pierce v. Underwood*, 487 U.S. 552, 566 (1988).

Under *Chevron*, we defer to an agency's interpretation of a statute if "the statute is silent or ambiguous with respect to the specific issue" and "the agency's answer is based on a permissible construction of the statute." 467 U.S. at 843. We find no such ambiguity in this case. Further, EPA's interpretation fails even the reasonableness standard of *Chevron's* second part: it seems bizarre that a statute intended to improve human health would, as EPA claimed at argument, lock the agency into looking at only one half of a substance's health effects in determining the maximum level for that substance. At oral argument even EPA counsel seemed reluctant to claim that the statute justified disregard of the beneficent effects of a pollutant bearing directly on the health symptoms that accounted for its being thought a pollutant at all (suppose, for example, a chemical that both impedes and enhances breathing, depending on the person or circumstances); he also seemed unable to distinguish that case from the one here—where the chemical evidently impedes breathing but provides defense against various cancers.

Legally, then, EPA must consider positive identifiable effects of a pollutant's presence in the ambient air in formulating air quality criteria under § 108 and NAAQS under § 109. EPA's other arguments are technical, and are of

two sorts: those that allegedly show petitioners' studies to be fatally flawed and those that allegedly show specific inflation of results in these studies. We need only consider the first sort, for EPA chose to give the studies no weight at all.

Petitioners rely primarily on studies by Lutter and Cupitt. EPA found that these could be ignored because the marginal benefits are difficult, if not impossible, to quantify reliably and because there is "no convincing basis for concluding that any such effects . . . would be significant." But these are not the criteria by which EPA assesses adverse health effects. It does not rigorously or uniformly demand either quantifiability, see, e.g., Ozone Final Rule, 62 Fed. Reg. at 38,860/3 (admitting that "quantitative risk estimates could not be developed" for certain adverse effects of ozone on which EPA regulated); EPA Ozone Brief at 48 (defending consideration of various effects that "played an important role in the Administrator's final decision" despite absence of quantification: "EPA did not estimate the risk for such effects because 'information [was] too limited to develop *quantitative* estimates,'—not because there is doubt the effects occur.") (alteration and emphasis in original) (citation omitted), or any specific level of significance. As we can see no reason for imposing a higher information threshold for beneficent effects than for maleficent ones, we have no basis for affirming EPA's decision to disregard the studies.

As we said above, we are remanding to EPA to formulate adequate decision criteria for its ordinary object of analysis—ill effects. We leave it to the agency on remand to determine whether, using the same approach as it does for those, tropospheric ozone has a beneficent effect, and if so, then to

assess ozone's net adverse health effect by whatever criteria it adopts.

IV. *Particulate Matter*

A. PM_{10} as Coarse Particle Indicator

We now turn to petitioners' challenges to the Agency's regulation of coarse particulate pollution. Both the 1987 NAAQS and the proposed standards regulate all particles with diameters under 10 micrometers, signified by the indicator PM_{10}. The PM_{10} spectrum includes both coarse and fine particles. While the main distinction between coarse and fine particles is the process by which they are produced, EPA and epidemiologists who study the health effects of particulate pollution identify coarse and fine particles through rough approximations of those particles' diameters. Coarse particles, which become airborne usually from the crushing and grinding of solids, generally have diameters between 2.5 and 10 micrometers and can thus be identified by the indicator $PM_{10-2.5}$. Fine particles, indicated in these new NAAQS by $PM_{2.5}$, come mainly from combustion or gases and generally have diameters of 2.5 micrometers or less.

Despite EPA's conclusion that coarse and fine particles pose independent and distinct threats to public health, the Agency chose not to adopt an indicator, such as $PM_{10-2.5}$, that would measure only the coarse fraction of PM_{10}. Petitioners make two arguments: that there is no scientific basis for regulating coarse particles at all, and that even if there were, retention of the PM_{10} indicator simultaneously with the establishment of the new fine particle indicator is unsupported by evidence in the record and arbitrary and capricious. We agree with this latter argument.

Beginning with petitioners' first challenge, we think the record contains sufficient evidence to justify the Agency's decision to regulate coarse particulate pollution. While the relationship between PM_{10} pollution and adverse health effects justifying the 1987 NAAQS was well-established, see *NRDC v. EPA*, 902 F.2d 962, 967-68 (D.C. Cir. 1990), two studies contained in the record of these proceedings concentrated specifically on the health effects caused by the coarse fraction of PM_{10} pollution. See Mary Ellen Gordian et al., "Particulate Air Pollution and Respiratory Disease in Anchorage, Alaska," 104 Envtl. Health Persp. 290 (1996) (studying volcanic ash); Brockton J. Hefflin et al., "Surveillance for Dust Storms and Respiratory Diseases in Washington State, 1991," 49 Archives of Envtl. Health 170 (1994) (studying fugitive dust). In addition, the record contains at least nine multivariate analyses finding statistically significant relationships with health effects for both $PM_{2.5}$ and PM_{10}, suggesting that the portion of PM_{10} pollution unaccounted for by $PM_{2.5}$ (i.e., coarse particles) explains some of the observed adverse health effects. In other words, because regression analysis holds the $PM_{2.5}$ component constant, the PM_{10} effect recognized in these equations actually evidences results from coarse particulate pollution. To be sure, petitioners have pointed to some evidence to the contrary. But given that our review is limited to "ascertaining that the choices made by the Administrator were reasonable and supported by the record," and does not include "judg[ing] the merits of competing expert views," *Lead Industries*, 647 F.2d at 1160, we find ample support for EPA's decision to regulate coarse particulate pollution above the 1987 levels.

Having found independent health consequences from coarse particulate pollution, EPA nevertheless decided to regulate the coarse fraction of PM_{10} indirectly, using PM_{10} (which includes both coarse and fine PM) as a "surrogate for coarse fraction particles." PM Final Rule, 62 Fed. Reg. at 38,668/2. While recognizing that $PM_{10-2.5}$ would have served as a satisfactory coarse particle indicator, EPA offers three justifications for its decision to use PM_{10} instead: (1) Both the Gordian and Hefflin studies used PM_{10}, not $PM_{10-2.5}$, as the variable in their models, (2) the PM_{10} standards will work in conjunction with the $PM_{2.5}$ standards by regulating the portion of particulate pollution not regulated by the $PM_{2.5}$ standards, and (3) a nationwide monitoring program for PM_{10} already exists. We find none of these explanations persuasive.

As to the first argument, while acknowledging that the indicator used in the studies captures both coarse and fine particles, EPA nevertheless maintains that PM_{10} is an effective indicator for the regulation of coarse particulate pollution. "Adopting the indicator used in the studies," the Agency says, "increases the likelihood that the level selected will result in the health protections predicted." But as EPA's own staff paper suggests, PM_{10} is "inherently confounded" by the presence of $PM_{2.5}$ particles, meaning that any regulation of PM_{10} pollution will include both coarse and fine particles. See PM Staff Paper at V-59. Using PM_{10} as the coarse particle indicator, instead of $PM_{10-2.5}$, will thus regulate more than just the coarse fraction of PM_{10}, and the amount of coarse particulate pollution permitted will depend (quite arbitrarily) on the amount of $PM_{2.5}$ pollution in the air. For example, assuming the 50 microgram annual PM_{10} level adopted by the Agency and a region with an annual $PM_{2.5}$

pollution level of 15 micrograms, the PM_{10} indicator would prohibit coarse particulate ($PM_{10-2.5}$) pollution from exceeding 35 micrograms. But in an area with only 5 micrograms of $PM_{2.5}$ pollution, the NAAQS would permit coarse particulate pollution to reach as high as 45 micrograms.

EPA's second argument—that the PM_{10} standard will work in conjunction with the $PM_{2.5}$ standard—suffers from the same deficiency. Accepting EPA's finding of "profound physicochemical differences" between coarse and fine PM, PM Staff Paper at V-59, such that each requires independent regulation, we cannot discern exactly how a PM_{10} standard, instead of a $PM_{10-2.5}$ standard, will work alongside a $PM_{2.5}$ standard to regulate only the coarse fraction of PM_{10}. EPA provides no explanation to aid us in understanding its decision. In fact, as the example above indicates, it is the very presence of a separate $PM_{2.5}$ standard that makes retention of the PM_{10} indicator arbitrary and capricious. Far from working in conjunction to regulate coarse particles, PM_{10} and $PM_{2.5}$ indicators, when used together, lead to "double regulation" of the $PM_{2.5}$ component of PM_{10} and potential underregulation of the $PM_{10-2.5}$ component since the amount of $PM_{10-2.5}$ permitted will always depend on the amount of $PM_{2.5}$ in the air.

EPA's final argument is pragmatic. It maintains that PM_{10} is a better indicator than $PM_{10-2.5}$ for coarse particulate pollution because a nationwide monitoring program for PM_{10} already exists. But as EPA acknowledges elsewhere in its brief, *NRDC* bars EPA from considering factors unrelated to public health in setting air quality standards. Echoing our decision in *Vinyl Chloride*, *NRDC* held that "the

Administrator may not consider cost and technological feasibility in determining what is 'safe'; such a determination 'must be based solely upon the risk to health.'" *NRDC*, 902 F.2d at 973 (quoting *Vinyl Chloride*, 824 F.2d 1146, 1166 (D.C. Cir. 1987) (in banc)); see also *American Petroleum Inst. v. Costle*, 665 F.2d 1176, 1185 (D.C. Cir. 1981); *Lead Industries*, 647 F.2d at 1148-55. The administrative convenience of using PM_{10} cannot justify choosing an indicator poorly matched to the relevant pollution agent.

In view of our conclusion that PM_{10} amounts to an arbitrary indicator for coarse particle pollution, we need not address petitioners' separate challenge to the PM_{10} levels or secondary standards. We note, however, that whatever levels the Agency ultimately selects for coarse particle pollution will need to comply with the requirements set forth in Part I of this opinion.

B. Fine Particles as "New Pollutant"

The Attorneys General of Ohio, Michigan, and West Virginia ("state petitioners") argue that EPA is regulating $PM_{2.5}$ for the first time. Because they consider $PM_{2.5}$ to be a "new pollutant," they argue that § 108 of the Clean Air Act requires EPA to conduct further research on $PM_{2.5}$'s health effects before listing it as a pollutant, to issue an air quality criteria document reflecting the latest science on the health effects of the pollutant, and to assist states by developing "data relating to the cost of installation and operation, energy requirements, emission reduction benefits, and environmental impact of the emission control technology." 42 U.S.C. § 7408(b)(1).

Although EPA never responds to this argument, five northeastern states (as respondent intervenors and amici) do. Pointing out that previous NAAQS have always included $PM_{2.5}$, these attorneys general support the EPA's decision not to list $PM_{2.5}$ separately as a new pollutant. We agree.

The state petitioners cannot escape the fact that the original standards for particulate pollution using Total Suspended Particulates (TSP) as indicator, as well as the 1987 NAAQS that used PM_{10}, included by definition every particle 2.5 micrometers and smaller. Moreover, in some areas fine particles often dominate PM_{10} pollution. See PM Staff Paper at V-63. By refining the NAAQS to focus on smaller particles that EPA found posed distinct threats to public health, EPA has done with these regulations exactly what we held it could do in 1987 when it made the change from Total Suspended Particulates to PM_{10}. See *NRDC*, 902 F.2d at 965-66. EPA's decision to update the NAAQS to focus on $PM_{2.5}$ merely continues a trend based on evolving science. It does not violate the provisions of § 108 of the Clean Air Act.

C. Failure to Identify a Biological Mechanism for Particulate Pollution's Relationship to Adverse Health Effects

Also challenging the establishment of a fine particle standard, non-state petitioners argue that EPA failed to explain the biological mechanism through which particulate pollution causes adverse health effects. Even if epidemiological studies show robust statistical relationships between pollution and health effects, they say, the absence of proof of causation—i.e., how particles actually interact with

cells and organs to cause sickness and death—is fatal to the standard. We disagree.

To begin with, the statute itself requires no such proof. The Administrator may regulate air pollutants "emissions of which, in his judgment, *cause or contribute* to air pollution which may *reasonably be anticipated* to endanger public health or welfare." 42 U.S.C. § 7408(a)(1)(A) (1994) (emphasis added). Moreover, this court has never required the type of explanation petitioners seek from EPA. In fact, we have expressly held that EPA's decision to adopt and set air quality standards need only be based on "reasonable extrapolations from some reliable evidence." *NRDC v. Thomas*, 805 F.2d 410, 432 (D.C. Cir. 1986). Indeed, were we to accept petitioners' view, EPA (or any agency for that matter) would be powerless to act whenever it first recognizes clear trends of mortality or morbidity in areas dominated by a particular pathogen.

The numerous epidemiological studies appearing in this record, some of which EPA also used to support the 1987 NAAQS, easily satisfy the standard articulated in the statute and emphasized repeatedly in decisions of this court. Covering diverse geographic locations with widely varying mixes of air pollution, the studies found statistically significant relationships between air-borne particulates signified by a variety of indicators and adverse health effects. Given EPA's statutory mandate to establish standards based on "the latest scientific knowledge," 42 U.S.C. §§ 7408(a)(2), 7409(d), the growing empirical evidence demonstrating a relationship between fine particle pollution and adverse health effects amply justifies establishment of new fine particle standards.

D. Visibility Effects

The Environmental Petitioners challenge the EPA's decision to set the secondary $PM_{2.5}$ NAAQS at levels equivalent to the primary NAAQS. According to the petitioners, the EPA's failure to set the secondary NAAQS at more stringent levels will result in "adverse visibility impacts" in parts of the country. In view of our conclusion in Part I, above, that the EPA has not adequately explained the principles upon which it relied in setting the levels in the NAAQS for PM, we need not reach the main thrust of the petitioners' challenge to the secondary NAAQS. On the other hand, the Environmental Petitioners have also raised a question of statutory interpretation, the resolution of which should assist the EPA if it revisits its decision to set the secondary $PM_{2.5}$ NAAQS.

In the PM Final Rule, the EPA decided "to address the welfare effects of PM on visibility by setting secondary standards identical to the suite of $PM_{2.5}$ primary standards, in conjunction with the establishment of a regional haze program under § 169A of the Act." PM Final Rule, 62 Fed. Reg. at 38,679/3. Section 169A "declares as a national goal the prevention . . . and the remedying of any . . . impairment of visibility in mandatory class I Federal areas . . . result[ing] from manmade air pollution." 42 U.S.C. § 7491. Mandatory class I areas include all international parks, and national parks and wilderness areas of a certain size. See 42 U.S.C. § 7472(a). The EPA concluded that reduction of $PM_{2.5}$ levels in class I areas would benefit the surrounding areas as well because "the same haze that degrades visibility within or looking out from a national park also degrades visibility outside it." PM Final Rule, 62 Fed. Reg. at 38,682/1.

The Environmental Petitioners argue that § 109(b)(2), 42 U.S.C. § 7409(b)(2), requires the EPA to set secondary NAAQS at a level sufficient to eliminate all adverse visibility effects and that it leaves the EPA no discretion to decide that some visibility impairment is better remedied through another program. This argument must be wrong. For, as the EPA argues, the Congress required the EPA to implement a regional haze program specifically in order to address adverse visibility effects that persist in class I areas after attainment of the secondary NAAQS. See 42 U.S.C. § 7470(1) (purpose of this part of Clean Air Act is "to protect public . . . welfare from any actual or potential adverse effect which . . . may reasonably be anticipate[d] to occur . . . notwithstanding attainment and maintenance of all [NAAQS]"). Accordingly, we conclude that the Congress did not intend the secondary NAAQS to eliminate all adverse visibility effects and, therefore, that the EPA acted within the scope of its authority in deciding to rely upon the regional haze program to mitigate some of the adverse visibility effects caused by $PM_{2.5}$.

Conclusion

We remand the cases to EPA for further consideration of all standards at issue. We do not vacate the new ozone standards because the standard is unlikely to engender costly compliance activities in light of our determination that it cannot be enforced by virtue of Clean Air Act § 181(a), 42 U.S.C. § 7511(a). We vacate the challenged coarse particulate matter standards because EPA will have to develop different standards when it corrects the arbitrarily chosen PM_{10} indicator. As to the fine particulate matter standards, we invite briefing on the question of remedy:

possibilities include but are not limited to vacatur, non-vacatur subject to application to vacate, and non-vacatur.[8] An order giving the briefing particulars will follow.

Because of the substantial investment of time this matter has required and the many unresolved issues bearing on application of whatever standards may emerge, this panel will in the interest of judicial economy retain jurisdiction over the cases following remand. See *Sierra Club v. Gorsuch*, 715 F.2d 653, 661 (D.C. Cir. 1983).

TATEL, *Circuit Judge*, dissenting from Part I:

The Clean Air Act has been on the books for decades, has been amended by Congress numerous times, and has been the subject of regular congressional oversight hearings. The Act has been parsed by this circuit no fewer than ten times in published opinions delineating EPA authority in the NAAQS-setting process. Yet this court now threatens to strike down section 109 of the Act as an unconstitutional delegation of congressional authority unless EPA can articulate an intelligible principle cabining its discretion. In doing so, the court ignores the last half-century of Supreme Court nondelegation jurisprudence, apparently viewing these permissive precedents as mere exceptions to the rule laid down 64 years ago in *A.L.A. Schechter Poultry Corp. v. United States*, 295 U.S. 495 (1935). Because section 109's delegation of authority is narrower and more principled than delegations the Supreme Court and this court have upheld

[8] Briefing should address the possibility that the previous particulate matter standard will spring back to life in response to our decision to vacate the new coarse particulate matter standard.

since *Schechter Poultry*, and because the record in this case demonstrates that EPA's discretion was in fact cabined by section 109, I respectfully dissent.

Section 109 requires EPA to publish air quality standards "the attainment and maintenance of which in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health." 42 U.S.C. § 7409(b)(1) (1994). Compare section 109 to the language of section 303 of the Communications Act of 1934, which gave the FCC authority to regulate broadcast licensing in the "public interest," and which the Supreme Court sustained in *National Broadcasting Co. v. United States*, 319 U.S. 190, 225-26 (1943). The FCC's general authority to issue regulations "as public convenience, interest, or necessity requires" was sustained in *United States v. Southwestern Cable Co.*, 392 U.S. 157, 178 (1968). The Supreme Court has sustained equally broad delegations to other agencies, including the Price Administrator's authority to fix "fair and equitable" commodities prices, *Yakus v. United States*, 321 U.S. 414, 426-27 (1944), the Federal Power Commission's authority to determine "just and reasonable" rates, *FPC v. Hope Natural Gas Co.*, 320 U.S. 591, 600 (1944), the War Department's authority to recover "excessive profits" earned on military contracts, *Lichter v. United States*, 334 U.S. 742, 778-786 (1948), and the Attorney General's authority to regulate new drugs that pose an "imminent hazard to public safety," *Touby v. United States*, 500 U.S. 160, 165 (1991). *See also Milk Indus. Found. v. Glickman*, 132 F.3d 1467, 1475 (D.C. Cir. 1998) (upholding delegation to Secretary of Agriculture to approve interstate compacts upon a finding of "compelling public interest").

Given this extensive Supreme Court precedent sustaining general congressional delegations, no wonder the First Circuit rejected a similar nondelegation challenge to the Clean Air Act's "requisite to protect the public health" language:

> The power granted to EPA is not "unconfined and vagrant". [*Schechter Poultry*, 295 U.S. at 551 (Cardozo, J., concurring).] The Agency has been given a well defined task by Congress—to reduce pollution to levels "requisite to protect the public health", in the case of primary standards. The Clean Air Act outlines the approach to be followed by the Agency and describes in detail many of its powers. . . . Yet there are many benchmarks to guide the Agency and the courts in determining whether or not EPA is exceeding its powers, not the least of which is that the rationality of the means can be tested against goals capable of fairly precise definition in the language of science.
>
> Administrative agencies are created by Congress because it is impossible for the Legislature to acquire sufficient information to manage each detail in the long process of extirpating the abuses identified by the legislation; the Agency must have flexibility to implement the congressional mandate. Therefore, although the delegation to EPA was a broad one, . . . we have little difficulty concluding that the delegation was not excessive.

South Terminal Corp. v. EPA, 504 F.2d 646, 677 (1st Cir. 1974).

I do not agree with my colleagues that *International Union, UAW v. OSHA*, 938 F.2d 1310 (D.C. Cir. 1991) ("*Lockout/Tagout I*"), requires a different result. That case remanded to OSHA for a more precise definition of section 3(8) of the Occupational Safety and Health Act, which granted the Agency authority to enact workplace safety standards "reasonably necessary or appropriate to provide safe or healthful employment or places of employment." *Id.* at 1316. The Clean Air Act does not delegate to EPA authority to do whatever is "*reasonably* necessary or appropriate" to protect public health. Instead, the statute directs the Agency to fashion standards that are "requisite" to protect the public health. In other words, EPA must set pollution standards at levels *necessary* to protect the public health, whether "reasonable" or not, whether "appropriate" or not.

Moreover, in setting standards "requisite to protect the public health," EPA discretion is not unlimited. The Clean Air Act directs EPA to base standards on "air quality criteria" that "accurately reflect the latest scientific knowledge useful in indicating the kind and extent of all identifiable effects on public health or welfare which may be expected from the presence of such pollutant in the ambient air, in varying quantities." 42 U.S.C. § 7408(a)(2); *see id.* § 7409(b)(1); *see also id.* § 7408(a)(2) (requiring air quality criteria, "to the extent practicable," to "include information on — (A) those variable factors (including atmospheric conditions) which of themselves or in combination with other factors may alter the effects on public health or welfare of such air pollutant; (B) the types of air pollutants which, when present in the atmosphere, may interact with such pollutant to produce an adverse effect on public health or welfare; and (C) any

known or anticipated adverse effects on welfare"). Indeed, the principles constraining EPA discretion are at least as specific as those this court sustained in *Lockout/Tagout II*, i.e., that OSHA must identify a "'significant' safety risk, to enact a safety standard that provides 'a high degree of worker protection'." *International Union, UAW v. OSHA*, 37 F.3d 665, 669 (D.C. Cir. 1994) (*"Lockout/Tagout II"*). By directing EPA to set NAAQS at levels "requisite"—not reasonably requisite—to protect the public health with "an adequate margin of safety," the Clean Air Act tells EPA exactly the same thing, i.e., ensure a high degree of protection.

Although this court's opinion might lead one to think that section 109's language permitted EPA to exercise unfettered discretion in choosing NAAQS, the record shows that EPA actually adhered to a disciplined decisionmaking process constrained by the statute's directive to set standards "requisite to protect the public health" based on criteria reflecting the "latest scientific knowledge." To identify which health effects were "significant enough" to warrant protection, EPA followed guidelines published by the American Thoracic Society. *See National Ambient Air Quality Standards for Ozone: Proposed Decision*, 61 Fed. Reg. 65,716, 65,722/1 (1996). It then set the ozone and fine particle standards within ranges recommended by CASAC, the independent scientific advisory committee created pursuant to section 109 of the Act. *See* 42 U.S.C. § 7409(d)(2).

CASAC must consist of at least one member of the National Academy of Sciences, one physician, and one person representing state air pollution control agencies. *See*

id. § 7409(d)(2)(A). In this case, CASAC also included medical doctors, epidemiologists, toxicologists and environmental scientists from leading research universities and institutions throughout the country. EPA must explain any departures from CASAC's recommendations. *See id.* § 7607(d)(3). Bringing scientific methods to their evaluation of the Agency's Criteria Document and Staff Paper, CASAC provides an objective justification for the pollution standards the Agency selects. *Cf. Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 593 (1993) ("'Scientific methodology today is based on generating hypotheses and testing them to see if they can be falsified; indeed, this methodology today is what distinguishes science from other fields of human inquiry.'") (citation omitted). Other federal agencies with rulemaking responsibilities in technical fields also rely heavily on the recommendations, policy advice, and critical review that scientific advisory committees provide. *See, e.g.*, 21 U.S.C. § 355(n) (describing scientific advisory panels for the Food and Drug Administration); 49 U.S.C. § 44912(c) (creating a scientific advisory panel for the Federal Aviation Administration).

Beginning with CASAC's ozone recommendations—not one member recommended going below .08 ppm—EPA gave two perfectly rational explanations for the level it selected. First, it set the annual level based on the different types of health effects observed above and below .08 ppm. Particularly below .08, the Agency determined, "[t]he most certain [ozone-]related effects, while judged to be adverse, are *transient and reversible*." *National Ambient Air Quality Standards for Ozone*, 62 Fed. Reg. 38,856, 38,868/2 (1997) (emphasis added). Characterizing this explanation as saying nothing more than that "lower exposure levels are associated

with lower risk to public health," Maj. Op. at 10, my colleagues find the Agency's reasoning unintelligible. But EPA did not find simply that public health risks decrease at lower levels. Instead, it found that public health effects *differ* below .08 ppm, i.e., that they are "transient and reversible."

Second, EPA explained that the level should not be set below naturally occurring background ozone concentrations. The Agency selected .08 ppm because it found that "a 0.07 ppm level would be closer to peak background levels that infrequently occur in some areas due to nonanthropogenic sources of [ozone] precursors, and thus more likely to be inappropriately targeted in some areas on such sources." 62 Fed. Reg. at 38,868/3. Of course, any level of ozone pollution above background concentrations is closer to background levels than one just above it. *See* Maj. Op. at 11. But as I read EPA's explanation, the Agency found that peak background levels sometimes occur at .07 ppm, not at .08 ppm. Indeed, the data EPA provided in its "Responses to Significant Comments" show a range of background concentrations from a low of .042 ppm in Olympic National Park in Washington to a high of .075 ppm in Quachita National Forest in Arizona. No region registered background levels above .075 ppm. *See* U.S. ENVIRONMENTAL PROTECTION AGENCY, RESPONSES TO SIGNIFICANT COMMENTS ON THE 1996 PROPOSED RULE ON THE NATIONAL AMBIENT AIR QUALITY STANDARDS FOR OZONE 94-96 (July 1997). In other words, by setting the annual standard at .08 rather than .07 ppm, EPA ensured that if a region surpasses the ozone standard, it will do so because of controllable human activity, not because of uncontrollable natural levels of ozone.

EPA offered an equally reasonable explanation for the fine particle pollution standard. Again limiting itself to the range approved by CASAC, EPA set the annual standard for $PM_{2.5}$ pollution at the lowest level where it had confidence that the epidemiological evidence (filtered through peer-reviewed, published studies) displayed a statistically significant relationship between air pollution and adverse public health effects.

Recognizing that its decision must "accurately reflect the latest scientific knowledge useful in indicating the kind and extent of all identifiable effects on public health," 42 U.S.C. § 7408(a)(2), EPA focused on three studies in the record that displayed a statistically significant relationship between fine particle pollution and adverse health effects: Joel Schwartz et al., *Is Daily Mortality Associated Specifically with Fine Particles?*, 46 J. AIR & WASTE MGMT. ASS'N 927 (1996); Joel Schwartz et al., *Acute Effects of Summer Air Pollution on Respiratory Symptom Reporting in Children*, 150 AM. J. RESPIRATORY & CRITICAL CARE MED. 1234 (1994); and Douglas W. Dockery et al., *An Association between Air Pollution and Mortality in Six U.S. Cities*, 329 NEW ENG. J. MED. 1753 (1993). The Agency explained that "there is generally *greatest statistical confidence* in observed associations [between fine particle pollution and adverse health effects] for levels at and above the mean concentration [of pollution observed in the studies that showed a statistically significant relationship]." *National Ambient Air Quality Standards for Particulate Matter*, 62 Fed. Reg. 38,652, 38,676/1 n.42 (1997) (emphasis added). Allowing "an adequate margin of safety," EPA then set the annual fine particle standard just below the lowest mean pollution levels observed in those studies, at 15 $\mu g/m^3$. *See id.* at 38,676/1

("An examination of the long-term means from the combined six city analyses of daily mortality [Schwartz et al. (1996)] and morbidity [Schwartz et al. (1994)], together with those from studies in individual cities for which statistically significant PM-effects associations are reported . . . finds mean concentrations ranging from about 16 to about 21 $\mu g/m^3$. . . ."); *id.* at 38,676/2 ("[The EPA] Staff Paper assessment of the concentration-response results [from Dockery et al. (1993)], concluded that the evidence for increased risk was more apparent at annual concentrations at or above 15 $\mu g/m^3$. . . .").

In a passage directly answering this court's concerns, *see* Maj. Op. at 11-12, the Staff Paper explained why the long-term mean served as a reasonable level for setting the fine particle NAAQS:

> The mean (or median) concentration may serve as a reasonable cutpoint of increased PM health risk since at this point there is generally the *greatest confidence* (i.e., the smallest confidence intervals) in the association and the reported [relative risk] estimates. The mean concentration considered by staff as most informative to test implications of potential alternative concentration-response functions is the *minimum mean concentration* associated with a study or studies reporting statistically significant increases in risk across a number of study locations. . . .

OFFICE OF AIR QUALITY PLANNING AND STANDARDS, U.S. ENVIRONMENTAL PROTECTION AGENCY, REVIEW OF NATIONAL AMBIENT AIR QUALITY STANDARDS FOR PARTICULATE MATTER: POLICY ASSESSMENT OF SCIENTIFIC

AND TECHNICAL INFORMATION, at E-4 (1996) (emphasis added).

EPA thus did not, as my colleagues charge, arbitrarily pick points on the ozone and particulate pollution continua indistinguishable from any other. Instead, acting pursuant to section 109's direction that it establish standards that, based on the "latest scientific knowledge" are "requisite" to protect the public health with "an adequate margin of safety," and operating within ranges approved by CASAC, the Agency set the ozone level just above peak background concentrations where the most certain health effects are not transient and reversible, and the fine particle level at the lowest long-term mean concentration observed in studies that showed a statistically significant relationship between fine particle pollution and adverse health effects. Whether EPA arbitrarily selected the studies it relied upon or drew mistaken conclusions from those studies (as petitioners argue), or whether EPA failed to live up to the principles it established for itself (as my colleagues believe, *see* Maj. Op. at 9-12), has nothing to do with our inquiry under the nondelegation doctrine. Those issues relate to whether the NAAQS are arbitrary and capricious. *See NRDC v. EPA*, 902 F.2d 962, 969, 971 (D.C. Cir. 1990). The Constitution requires that Congress articulate intelligible principles; Congress has done so here.

A final point. Unlike OSHA, which *Lockout/Tagout I* recognized has authority to reach into every workplace to dictate what is safe, to impose extensive civil and criminal penalties, and "to decide which firms will live and which will die," *Lockout/Tagout I*, 938 F.2d at 1318, EPA regulates primarily by setting standards for states to develop their own

plans. *See* 42 U.S.C. § 7401(a)(3) (Congress finds "that air pollution prevention . . . and air pollution control at its source is the primary responsibility of States and local governments."). Indeed, because states have three years to submit implementation plans, which are themselves subject to notice, comment, public hearing, and frequent renegotiation, we will not know for years precisely how the ozone and particle NAAQS will actually affect individual businesses. Only if a state fails to produce an acceptable plan can EPA terminate federal highway funds or impose its own implementation plan. Because the Clean Air Act gives politically accountable state governments primary responsibility for determining how to distribute the burdens of pollution reduction and therefore how the NAAQS will affect specific industries and individual businesses, courts have less reason to second-guess the specificity of the congressional delegation. Moreover, if the states disagree with the standards EPA has set, they have 535 representatives in Congress to turn to for help. In fact, legislation to overturn the very NAAQS at issue in this case was introduced in the last Congress. *See* H.R. 1984, 105th Cong. (1997) ("A bill to provide for a four-year moratorium on the establishment of new standards for ozone and fine particulate matter under the Clean Air Act, pending further implementation of the Clean Air Act Amendments of 1990, additional review and air quality monitoring under that Act."); S. 1084, 105th Cong. (1997) ("A bill to establish a research and monitoring program for the national ambient air quality standards for ozone and particulate matter and to reinstate the original standards under the Clean Air Act, and for other purposes.").

APPENDIX B

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 97-1440

AMERICAN TRUCKING ASSOCIATIONS, INC., ET AL.,
PETITIONERS

v.

UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY, RESPONDENT

COMMONWEALTH OF MASSACHUSETTS, ET AL.,
INTERVENORS

Consolidated with
Nos. 97-1546, 97-1548, 97-1551 to 97-1553,
97-1555, 97-1559, 97-1561, 97-1562, 97-1565, 97-1567,
97-1571, 97-1573, 97-1574, 97-1576, 97-1578, 97-1579,
97-1582, 97-1585 to 97-1588, 97-1592,
97-1594, 97-1596 to 97-1598

No. 97-1441

AMERICAN TRUCKING ASSOCIATIONS, INC., ET AL.,
PETITIONERS

v.

UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY, RESPONDENT

COMMONWEALTH OF MASSACHUSETTS, ET AL.,
INTERVENORS

Consolidated with
Nos. 97-1502, 97-1505, 97-1508 to 97-1510,
97-1512 to 97-1514, 97-1518, 97-1519, 97-1526, 97-1531,
97-1539, 97-1566, 97-1568, 97-1570, 97-1572, 97-1575,
97-1584, 97-1589, 97-1591, 97-1595, 97-1619

[Filed October 29, 1999]

BEFORE: WILLIAMS, GINSBURG, AND TATEL, *Circuit Judges*.

Opinion *per curiam* on petitions for rehearing.

Opinion concurring in partial grant of rehearing and dissenting in part from the panel's denial of rehearing filed by *Circuit Judge* TATEL.

ORDER

PER CURIAM

This matter is before the court for consideration of respondent Environmental Protection Agency's (EPA) petition for panel rehearing in Nos. 97-1440 and 97-1441, the responses thereto, and the petitions for panel rehearing of intervenors-respondents New Jersey and Massachusetts in Nos. 97-1440 and 97-1441, Citizen for Balanced Transportation, et al. in No. 97-1440, and the American Lung Association in Nos. 97-1440 and 97-1441. Upon consideration of the foregoing, it is

ORDERED that the petitions of EPA, New Jersey and Massachusetts, and the American Lung Association be granted in part. The court accordingly modifies Parts III.A.2 & .3 and the conclusion of the court's original opinion as set forth in the opinion of the court filed herein this date. It is

FURTHER ORDERED that the remainder of EPA, New Jersey and Massachusetts, and the American Lung Association's petitions be denied and that Citizen for Balanced Transportation's petition be denied.

Opinion for the Court filed *PER CURIAM*:

The Environmental Protection Agency petitions for rehearing, challenging this court's holdings that: (1) with respect to the factors the agency uses to determine the degree of public health concern associated with different levels of a pollutant, it "appears to have articulated no 'intelligible principle' to channel its application of these factors; nor is one apparent from the statute," *American Trucking Ass'ns v.*

United States Environmental Protection Agency, 175 F.3d 1027, 1034 (D.C. Cir. 1999); (2) "Subpart 2, not Subpart 1, provides the classifications and attainment dates for any areas designated nonattainment under a revised primary ozone NAAQS, and the EPA must enforce any revised primary ozone NAAQS under Subpart 2," *id.* at 1050; and (3) "EPA must consider positive identifiable effects of a pollutant's presence in the ambient air in formulating air quality criteria under § 108 and NAAQS under § 109," *id.* at 1052. For the following reasons, we grant the petition for rehearing in part and deny it in part.

I. Delegation

In the EPA's petition for rehearing, counsel for the agency argue that § 109 of the Clean Air Act contains the following principle limiting the agency's discretion: "The levels [set in a NAAQS] must be *necessary* for public health protection: neither *more* nor *less* stringent than necessary, but 'requisite.'" EPA Pet. at 8 (emphases in original). Further, counsel claim that in setting the NAAQS at issue in this case the agency applied corollaries of this principle, one for particulate matter, one for ozone,[1] to derive determinate standards.

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[1] For particulate matter, counsel now state that the EPA's decision was determined by the norm of "the 95 percent confidence level to separate results that could be the product of chance from more convincing evidence of causation." EPA Pet. at 15. For ozone, counsel now state that EPA inferred the existence of effects below 0.08 ppm, but nonetheless concluded that they were "less serious because they are 'transient and reversible.'" EPA Pet. at 16.

In denying the EPA's petition for rehearing on this issue, we note that the agency previously put forward neither the assertedly intelligible principle its counsel now claim to find in the statute nor the corollaries its counsel now implicitly derive therefrom. To be sure, in the rulemakings that set the NAAQS, the EPA mentioned the corollary propositions its counsel now claim served as intelligible limiting principles, but the agency did not identify either as a limit upon its discretion; the EPA never suggested that it could not (or in a later rulemaking would not) base a NAAQS upon evidence that did not meet the 95 percent confidence level or that revealed adverse but transient effects.[2] In its briefs defending the NAAQS, the EPA merely asserted that the Clean Air Act provides an intelligible principle; it failed both to state that principle and to argue that its revised NAAQS were promulgated in accordance with that principle. EPA PM Brief at 145-49; EPA Ozone Brief at 77-80. Indeed, the EPA's briefs in each of these two cases contained the same four sentences assuring the court that the statute provides a principle without explaining what the agency understands that principle to be:

> [Section] 109(b)(1) requires EPA to promulgate NAAQS based on air quality criteria issued under § 108 that are "requisite to protect the public health" with "an adequate margin of safety." This language and related legislative history provide directions for EPA to follow in setting the NAAQS. Moreover, EPA has consistently

[2] The court's opinion mentioned EPA's observation in the record that effects of ozone concentrations below the standard selected were "transient and reversible," 175 F.3d at 1035, but only in connection with the dissent's suggestion, *see id.* at 1059, that this was the controlling principle.

> interpreted § 109(b)(1) to provide further decisionmaking criteria to guide the standard setting process. Thus, the CAA provides a more than sufficient "intelligible principle" to guide EPA's discretion. EPA Ozone Brief at 78; *see also* EPA PM Brief at 148.

These sentences begged the key question about that intelligible principle: "What is it?"

As we noted in our first opinion in this case, when "statutory language and an existing agency interpretation involve an unconstitutional delegation of power, but an interpretation without the constitutional weakness is or may be available, our response is not to strike down the statute but to give the agency an opportunity to extract a determinate standard on its own." 175 F.3d at 1038. Counsel for the EPA have now extracted from the statute what they contend is an intelligible principle limiting the EPA's discretion. We express no opinion upon the sufficiency of that principle; only after the EPA itself has applied it in setting a NAAQS can we say whether the principle, in practice, fulfills the purposes of the nondelegation doctrine. *See Yakus v. United States*, 321 U.S. 414, 424-26 (1944); *Amalgamated Meat Cutters v. Connally*, 337 F. Supp. 737, 759 (D.D.C. 1971) (Leventhal, J., for three-judge panel).

A final word about our nondelegation holding: The Supreme Court has long held that an ambiguous principle in a statute delegating power to an agency can gain "meaningful content from the purpose of the Act, its factual background and the statutory context in which [it] appear[s]." *American Power & Light Co. v. SEC*, 329 U.S. 90, 104 (1946); *see also Federal Radio Comm'n v. Nelson Bros. Bond & Mort. Co.*,

289 U.S. 266, 285 (1933) (upholding delegation to Federal Radio Commission to grant licenses "as public convenience, interest or necessity requires" in light of "its context [and] the nature of radio transmission and reception"); *Fahey v. Mallonee*, 332 U.S. 245, 250 (1947) (upholding delegation to the Federal Home Loan Bank Board to promulgate regulations for the appointment of a conservator for savings and loan associations in view of the banking industry's "well-defined practices for the appointment of conservators"). This court has done the same. *See, e.g., National Ass'n of Broadcasters v. Copyright Royalty Tribunal*, 675 F.2d 367, 376 n.12 (1982) (finding an intelligible principle to guide the tribunal in disbursing cable royalty fees in "specific statements in the legislative history and in the general philosophy of the Act itself"); *Amalgamated Meat Cutters*, 337 F. Supp. at 747-49 (interpreting the Economic Stabilization Act of 1970 in light of "the historic context of government stabilization measures" in order to "negative[ ] a conclusion that the whole program was set adrift without a rudder"). To choose among permissible interpretations of an ambiguous principle, of course, is to make a policy decision, and since *Chevron* it has been clear that "[t]he responsibilities for assessing the wisdom of such policy choices . . . are not judicial ones." *Chevron U.S.A. Inc. v. NRDC*, 467 U.S. 837, 866 (1984). Accordingly, just as we must defer to an agency's reasonable interpretation of an ambiguous statutory term, we must defer to an agency's reasonable interpretation of a statute containing only an ambiguous principle by which to guide its exercise of delegated authority. *But see* Kenneth Culp Davis, *A New Approach to Delegation*, 36 U. CHI. L. REV. 713, 713 (1969) (arguing that "judicial inquiries [under the nondelegation doctrine] should shift from statutory standards

to administrative safeguards"). In sum, the approach of the *Benzene* case, in which the Supreme Court itself identified an intelligible principle in an ambiguous statute, has given way to the approach of *Chevron*. *See Industrial Union Dep't v. American Petroleum Inst. (Benzene)*, 448 U.S. 607, 642, 646 (1980) (Stevens, J., plurality) (interpreting § 3(8) of the Occupational Health and Safety Act to require "a threshold finding . . . that significant risks are present," thereby finding in the statute an intelligible principle).[3]

II. Subpart 2 and the Revised Ozone Standard

In its petition for rehearing, the EPA challenges the holdings in Parts III.A.2 and III.A.3 of our original opinion, *see* 175 F.3d at 1048-51, as well as our jurisdiction to reach those issues. We address the jurisdictional point first.

A. Jurisdiction

The EPA argues that because it has taken no final action implementing the revised NAAQS this court lacks jurisdiction to reach the question whether Subpart 2 prevents the agency from implementing a revised ozone NAAQS under Subpart 1. *See* 42 U.S.C. § 7607(b) (limiting this court's jurisdiction to review of "nationally applicable regulations promulgated, or final agency action taken, by the

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[3] We note that Judge Silberman's dissent from the denial of rehearing *en banc* turns largely on his dim view of the Court's use of the non-delegation doctrine in *Benzene*, which he characterizes as "only a makeweight, tossed into the analysis . . . to help justify the result." Whatever the merits of Judge Silberman's critique of *Benzene*, we do not see how a lower court can properly rest its jurisprudence on the rejection of a Supreme Court decision.

Administrator"); *see also Sierra Club v. Thomas*, 828 F.2d 783, 792 (D.C. Cir. 1987).[4] That this claim is raised for the first time in a petition for rehearing does not, of course, alter our obligation to "satisfy [our]self ... of [our] own jurisdiction." *Steel Co. v. Citizens for a Better Environment*, 118 S.Ct. 1003, 1012-13 (1998).

Whether agency action is final for purposes of § 7607(b) entails a functional, not a formal, inquiry. *See NRDC v. EPA*, 22 F.3d 1125, 1132-33 (D.C. Cir. 1994); *Ciba-Geigy Corp. v. EPA*, 801 F.2d 430, 436 (D.C. Cir. 1986) ("Once the agency publicly articulates an unequivocal position ... and expects regulated entities to alter their primary conduct to conform to that position, the agency has voluntarily relinquished the benefit of postponed judicial review"). In this case, "there is nothing tentative about the EPA's interpretation of [Subpart 2]; it is unambiguous and devoid of any suggestion that it might be subject to subsequent revision." *Her Majesty the Queen ex rel. Ontario v. EPA*, 912 F.2d 1525, 1532 (D.C. Cir. 1990); *see also* Final Rule: National Ambient Air Quality Standards for Ozone, 62 Fed. Reg. 38,856, 38,885/2 (1997) ("There is no language in sections 181 or 182 that precludes the implementation of a different [ozone] standard under other authority [i.e., Subpart 1]; those provisions [i.e., Subpart 2] simply govern the implementation of the 1-hour, 0.12 ppm O_3 standard"). Moreover, by promulgating a revised ozone NAAQS the EPA has triggered the provisions of §§ 107(d)(1) and 172, which impose a number of

[4] The EPA has yet to designate an area nonattainment. Therefore, although the agency does not so argue, if it were correct, then this court would also lack jurisdiction to decide, as it did, that Subpart 2 does not alter the agency's power to designate areas as nonattainment under a revised NAAQS. *See* 175 F.3d at 1047-48.

requirements upon the states, the first being that the Governor of each state must determine which areas do not presently comply with the revised NAAQS; those areas that do not comply will ultimately be required to do so. The EPA, therefore, has reached a final decision regarding its power to implement its revised ozone standard, which this court has jurisdiction to review.[5]

The EPA also argues that the statements in its preamble regarding implementation are not "ripe for review," a point which it raised in a single sentence in its original brief to this court. EPA Pet. at 19; EPA Ozone Brief at 74. The question whether Subpart 2 prevents the EPA from designating an area as nonattainment under its revised ozone standard or from implementing that designation except in conformity with Subpart 2 is a pure question of law, the resolution of which would not benefit from a more concrete setting. As the agency's action is undoubtedly final, the question is fit for

[5] The EPA attempts to buttress its jurisdictional argument by reference to 42 U.S.C. § 7502(a)(1)(B), which it claims "defers challenges to EPA's implementation decisions classifying areas for setting attainment dates until EPA takes final action on a SIP ... or triggers sanctions ... [after] a state fails to submit a SIP." EPA Pet. at 19. The section to which the EPA refers states as follows: "The Administrator shall publish a notice in the Federal Register announcing each [attainment or nonattainment] classification.... Such classification ... shall not be subject to judicial review until the Administrator takes final action under [the statutes the EPA cites in its petition]." That is, the EPA's decision to classify a particular area as attainment or nonattainment is not subject to review merely because the EPA published that decision in the Federal Register. Neither this section nor the analogous § 7511(a)(3), to which the EPA also cites, prevents a court from deciding, prior to the classification of a particular area, whether the agency has validly promulgated a revised standard.

review. *See Rio Grande Pipeline Co. v. FERC*, 178 F.3d 533, 540-41 (D.C. Cir. 1999).

B. Subpart 2 and the EPA's Authority to Enforce a Revised Ozone Standard

The EPA's arguments in its petition for rehearing do not convince us that we erred in rejecting the EPA's contention that "the reference to § 107(d) in § 181(a)(1) relates only to designations made under § 107(d)(4)," 175 F.3d at 1050, and in holding instead that "§ 181(a) clearly encompasses nonattainment designations made under all subsections of § 107(d)." *Id.* Indeed, we note that the EPA has abandoned its original position, arguing now that the "most logical reading" of § 181(a) is that the reference to § 107(d) includes §§ 107(d)(1)(C) and 107(d)(4). EPA Pet. at 24. We find this new reading no more persuasive than the old. As the EPA notes, all five Subparts of the Clean Air Act providing requirements for nonattainment areas begin with a reference to § 107(d). *See* 42 U.S.C. §§ 7502(a)(1)(A), 7511(a)(1), 7512(a)(1), 7513(a), 7514(a). It is by no means clear, however, that the references to § 107(d) in Subparts 1 and 3 through 5 include only designations made under §§ 107(d)(1)(C) and (d)(4). Not only does the EPA never argue that they are so limited, but on its theory the reference to § 107(d) in Subpart 1 also encompasses designations made under § 107(d)(1)(A). EPA Pet. at 25. Accordingly, we reject the EPA's new interpretation of § 181(a), for it is contrary to "the normal rule of statutory construction that identical words used in different parts of the same act are intended to have the same meaning." *Gustafson v. Alloyd Co.*, 513 U.S. 561, 570 (1995).

Still, the EPA does raise two points relating to Subpart 2 which lead us to grant the EPA's petition for rehearing in part and to make the following revisions to our opinion.

The EPA correctly points out that we erroneously treated the attainment dates in the table in Subpart 2 as representing the Congress's judgment about what is "as expeditiously as practicable" in reducing the level of ozone in an area; in fact, those dates represent what the Congress set as outer limits. *See* 42 U.S.C. § 7511(a)(1) ("For each area classified under this subsection, the primary standard attainment date for ozone shall be as expeditiously as practicable but not later than the date provided in table 1"). EPA Pet. at 25 n.35. Accordingly, we grant the EPA's petition for rehearing to the extent of deleting the final three sentences of Part III.A.3, *see* 175 F.3d at 1051, and substituting for them the following sentence:

> Therefore, we conclude that Subpart 2 erects no bar to the EPA's requiring compliance with a revised secondary ozone NAAQS "as expeditiously as practicable."

The EPA also contends that the conclusion to Part III.A.2, *see id.* at 1050 ("the EPA must enforce any revised primary ozone NAAQS under Subpart 2"), conflicts with our description of that same conclusion at the end of the opinion, *see id.* at 1057 (revised ozone NAAQS "cannot be enforced by virtue of [Subpart 2]"). We agree that the two sentences are in tension. To clarify the matter, we grant the EPA's petition for rehearing to the extent of making the following two revisions to our original opinion. First, we replace the final paragraph of Part III.A.2, *see id.* at 1050, with the following:

> In sum, because the reference to § 107(d) in § 181(a)(1) includes the designation of an area as nonattainment for ozone under a revised ozone NAAQS, that is, under § 107(d)(1), the EPA can enforce a revised primary ozone NAAQS only in conformity with Subpart 2.

Second, we replace the second sentence of the Conclusion, *see id.* at 1057, with the following:

> We do not vacate the new ozone standards because the parties have not shown that the standard is likely to engender costly compliance activities in light of our determination that it can be enforced only in conformity with Subpart 2.

As with the $PM_{2.5}$ NAAQS, our decision not to vacate the ozone NAAQS "is without prejudice to the ability of any party to apply for vacatur in the future, should circumstances develop in which the presence of this standard threatens a more imminent harm." *American Trucking Ass'ns, Inc. v. EPA*, No. 97-1440 (D.C. Cir. Jun. 18, 1999).

III. Beneficent Health Effects

The arguments in the EPA's petition for rehearing give us no reason to doubt the correctness of our conclusion that "all identifiable effects," as used in CAA § 108(a)(2), "on its face . . . include[s] beneficent effects." 175 F.3d at 1051. Nor do those arguments warrant consideration in a published opinion. We express no opinion, of course, upon the effect, if any, that studies showing the beneficial effects of tropospheric ozone, *see id.* at 1052, might have upon any ozone standard the EPA may promulgate on remand.

IV. Conclusion

For the above reasons, the EPA's petition for rehearing is

Granted in part and denied in part.

TATEL, *Circuit Judge*, concurring in part and dissenting in part:

I concur in the partial grant of rehearing with respect to enforcement of the revised ozone standard because, as modified, the opinion now leaves open the possibility that EPA can enforce the new ozone NAAQS without conflicting with Subpart 2's classifications and attainment dates. While I too think that we have jurisdiction to decide the enforcement issue, I write separately because I do not entirely agree with the rationale of the modified panel opinion.

The panel understood EPA's original position to be that, although Subpart 2 limited the Agency's enforcement of the pre-existing one-hour 0.12 ppm ozone NAAQS, it "has no effect upon the EPA's authority to enforce a revised primary ozone NAAQS." *American Trucking Associations v. EPA*, 175 F.3d 1027, 1048 ("*ATA*"). That interpretation, the panel held, not only conflicted with section 7511(a)(1)'s text and legislative history, *see id.*, 175 F.3d at 1048-49, but by leaving the Agency free to "requir[e] areas to comply either more quickly or with a more stringent ozone NAAQS," it defied Congress's clear intent to "extend[ ] the time for nonattainment areas to comply with the 0.12 ppm ozone NAAQS." *Id.* at 1049.

Having rejected the Agency's interpretation, the panel went on to agree with petitioners that Subpart 2 embodies "a

comprehensive enforcement scheme" that "specifically provides classifications and dates for *all* areas designated nonattainment under *any* ozone NAAQS." *Id.* at 1049, 1048 (emphasis added). This holding meant that areas not covered by Table 1 in Subpart 2—i.e. those with one-hour ozone design values below 0.121 ppm—were completely exempt from any ozone regulation whatsoever. Although the panel acknowledged that EPA must continue to revise the NAAQS, *see id.* at 1047, it concluded that the revised standard "cannot be enforced by virtue of [Subpart 2]." *Id.* at 1057.

After reading EPA's petition for rehearing and the various responses, I no longer believe that it was "the unambiguously expressed intent of Congress" to command EPA to revise the ozone standards, while denying it the power to enforce them. *Chevron U.S.A., Inc. v. NRDC*, 467 U.S. 837, 842. Table 1 specifically provides classifications and attainment dates for some areas, but as EPA points out, "it establishes *no* attainment dates or classifications for nonattainment areas with 'design values' lower than 0.121 ppm." EPA Pet. Reh'g at 22-23. As the Agency argues, it is thus difficult to see how Subpart 2 can "specifically provide []" attainment dates for areas that are designated nonattainment under the new standard but are not covered by Table 1. *See id.* at 22-24. This gap in Table 1 makes it at least ambiguous whether Subpart 2 "*specifically* provide[s]" classifications and attainment dates for *all* areas exceeding the revised 0.08 ppm ozone NAAQS.

EPA also points out that treating Subpart 2 as the exclusive enforcement scheme for all areas leads to "irrational and contradictory consequences." *Id.* at 23. Subpart 2 provides that "[e]ach area designated

nonattainment for ozone pursuant to section 7407(d) of this title shall be classified . . . under table 1, by operation of law. . . ." 42 U.S.C. § 7511(a)(1). Even if the panel is correct that the reference to section 7407(d) includes designations under a revised NAAQS pursuant to section 7407(d)(1)(A), *see* Slip Op. on Reh'g at 6-7, the fact remains that the only "nonattainment areas for which classifications [and attainment dates] are specifically provided under" Table 1 are those having one-hour ozone design values of 0.121 ppm or greater. *ATA*, 175 F.3d at 1048 (quoting 42 U.S.C. § 7502(a)(1)(C), (a)(2)(D)). Classifying other areas "under table 1, by operation of law" is thus impossible or, at the very least, not "unambiguously" "specifically provided for." And although, as the panel noted, "a title [of a statute or section] cannot be allowed to create an ambiguity in the first place," *id.* at 1050, the ambiguity in this statute—Can section 7511(a)(1) be applied literally to areas that have attained the old standard but fail to meet the new one?—appears in the text of Subpart 2 itself.

Moreover, EPA has offered a plausible interpretation of the statute that reasonably reconciles the provisions of Subparts 1 and 2. In its Petition for Rehearing, the Agency states that "Subpart 2 addresses continued nonattainment for the primary one-hour ozone standard," EPA Pet. Reh'g at 20, while Subpart 1 provides implementation authority for the new ozone standard in areas that have already attained the old one, *see id.* at 20-22. The Agency articulated this same reading of the statute in its original brief, stating that "consistent with Congress' intent, EPA interpreted the Subpart 2 provisions to remain in place for areas not attaining the one-hour standard, and concluded the one-hour standard should continue to apply until EPA determines that an area

attains that standard, thus facilitating continued implementation of the relevant Subpart 2 measures." EPA Ozone Brief at 72. The final rulemaking—the Agency action we are reviewing here—is even clearer about the relationship between Subparts 1 and 2:

> [A]t the time of the proposal of the new O_3 standard, EPA had proposed an interpretation of the Act in the proposed Interim Implementation Policy (61 FR 65764, December 13, 1996) under which the provisions of subpart 2 of part D of Title I of the Act would not apply to existing O_3 nonattainment areas once a new O_3 standard becomes effective.
>
> In light of comments received regarding the interpretation proposed in the Interim Implementation Policy, EPA has reconsidered that interpretation and now believes that the Act should be interpreted such that the provisions of subpart 2 continue to apply to O_3 nonattainment areas for purposes of achieving attainment of the current 1-hour standard. As a consequence, the provisions of subpart 2, which govern implementation of the 1-hour O_3 standard in O_3 nonattainment areas, will continue to apply as a matter of law for so long as an area is not attaining the 1-hour standard. Once an area attains that standard, however, the purpose of the provisions of subpart 2 will have been achieved and those provisions will no longer apply. However, the provisions of subpart 1 of part D of Title I of the Act would apply to the implementation of the new 8-hour O_3 standards.
>
> To facilitate the implementation of those provisions and to ensure a smooth transition to the implementation of the new 8-hour standard, the 1-hour standard should

> remain applicable to areas that are not attaining the 1-hour standard. Therefore, the 1-hour standard will remain applicable to an area until EPA determines that it has attained the 1-hour standard, at which point the 1-hour standard will no longer apply to that area.

62 Fed. Reg. 38,873 (1997), *cited in* EPA Ozone Brief at 72. *See also* 40 C.F.R. § 50.9(b) (continuing to apply the one-hour 0.12 ppm standard until it is attained).

To be sure, EPA's original brief did seem to advance the position the panel rejected—that in enforcing the new ozone NAAQS, the Agency is free to disregard altogether Subpart 2's timetable. *See* EPA Ozone Brief at 69-71. Given the clarity of the final rule, however, I no longer believe that EPA actually intended to argue that it could subvert Subpart 2's schedule in enforcing the new ozone NAAQS. When EPA's lawyers said in the original brief that Subpart 2 is inapplicable to nonattainment areas under the new ozone standard, I assume they must have meant that even under the new standard, Subpart 2 continues to apply to areas covered by Table 1—not that Subpart 2 no longer applies at all. Viewed this way, EPA's original brief and its petition for rehearing are perfectly consistent with the final rule: all three interpret the Act to mean that Subpart 2 still applies to an area until it attains the one-hour 0.12 ppm standard. This interpretation puts to rest the panel's concern that Subpart 2's attainment schedule "would have been stillborn had the EPA revised the ozone NAAQS immediately after the Congress enacted the 1990 amendments." *ATA*, 175 F.3d at 1050.

The Agency's petition also explains the practical consequences of its interpretation of Subpart 2. Although EPA may not enforce a stricter ozone standard in Los

Angeles earlier than the year 2012, *see id.* at 1049, the Agency need not wait for Los Angeles to achieve the old standard before requiring the rest of the country to move toward cleaner air. *Cf.* EPA Pet. Reh'g at 25 (suggesting that Los Angeles "is the only area of the nation" where compliance with the 0.08 ppm NAAQS under Subpart 1 could possibly be required at the same time as compliance with the 0.12 ppm NAAQS under Subpart 2). In other words, Table 1 functions as a safe harbor for areas like Los Angeles whose ozone levels exceed 0.121 ppm.

To sum up, the panel rejected what it was led to believe was EPA's view that Subpart 2 applied only to nonattainment areas under the old standard but no longer applies at all under the new standard. The panel held instead that Subpart 2 applies to *all* nonattainment areas under *any* standard, foreclosing implementation of a new standard in any area not covered by Table 1. EPA has now clarified its interpretation of the Act. A middle ground originally articulated in its final rulemaking, the Agency's position harmonizes its general enforcement authority under Subpart 1 with the specific provisions of Subpart 2. Subpart 2 continues to govern those areas covered by Table 1, just as it did under the old NAAQS, but in areas that have attained the old standard, nothing precludes enforcement of the new standard under Subpart 1.

I would have granted rehearing and held that the Agency's position represents a reasonable interpretation of an ambiguous statute. *See Chevron*, 467 U.S. at 844 (upholding EPA's construction of NAAQS attainment provisions of the Clean Air Act, stating that "a court may not substitute its own construction of a statutory provision for a reasonable

interpretation made by the administrator of an agency."). I nonetheless concur in the judgment because the revised opinion's statement that "the EPA can enforce a revised primary ozone NAAQS only in conformity with Subpart 2" leaves open the possibility that the new ozone standard can be implemented in areas that have attained the old standard.

For the reasons set forth in my statement dissenting from the denial of rehearing *en banc*, I respectfully dissent from the denial of rehearing as to Part I of the panel opinion ("Delegation").

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 97-1440

AMERICAN TRUCKING ASSOCIATIONS, INC., ET AL.,
PETITIONERS

v.

UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY, RESPONDENT

COMMONWEALTH OF MASSACHUSETTS, ET AL.,
INTERVENORS

Consolidated with
Nos. 97-1546, 97-1548, 97-1551 to 97-1553,
97-1555, 97-1559, 97-1561, 97-1562, 97-1565, 97-1567,
97-1571, 97-1573, 97-1574, 97-1576, 97-1578, 97-1579,
97-1582, 97-1585 to 97-1588, 97-1592,
97-1594, 97-1596 to 97-1598

No. 97-1441

AMERICAN TRUCKING ASSOCIATIONS, INC., ET AL.,
PETITIONERS

v.

UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY, RESPONDENT

COMMONWEALTH OF MASSACHUSETTS, ET AL.,
INTERVENORS

Consolidated with
Nos. 97-1502, 97-1505, 97-1508 to 97-1510,
97-1512 to 97-1514, 97- 1518, 97-1519, 97-1526, 97-1531,
97-1539, 97-1566, 97-1568, 97-1570, 97-1572, 97-1575,
97-1584, 97-1589, 97-1591, 97-1595, 97-1619

[Filed October 29, 1999]

On Respondent EPA's Suggestion for Rehearing *En Banc*

Before: EDWARDS, *Chief Judge*, WALD, SILBERMAN, WILLIAMS, GINSBURG, SENTELLE, HENDERSON, RANDOLPH, ROGERS, TATEL, and GARLAND, *Circuit Judges*.

Circuit Judges WALD and HENDERSON did not participate in this matter.

Chief Judge EDWARDS and *Circuit Judges* SILBERMAN, ROGERS, TATEL, and GARLAND would grant the suggestion.

A statement of *Circuit Judge* SILBERMAN dissenting from the denial of rehearing *en banc* is attached.

A statement of *Circuit Judge* TATEL dissenting from the denial of rehearing *en banc*, in which *Chief Judge* EDWARDS and *Circuit Judge* GARLAND join, is attached.

PER CURIAM

Respondent EPA's Suggestion for Rehearing *En Banc* and the responses thereto have been circulated to the full court. The taking of a vote was requested. Thereafter, a majority of the judges of the court in regular active service did not vote in favor of the suggestion. Upon consideration of the foregoing, it is

ORDERED that the suggestion be denied.

SILBERMAN, *Circuit Judge*, dissenting from the denial of rehearing *en banc*:

The panel's reliance on the nondelegation doctrine to reject EPA's interpretation of section 109 of the Clean Air Act is rather ingenious, but I regret that it seems to me to be fundamentally unsound. I do not think that doctrine can be employed to force an agency to narrow a broad legislative delegation from Congress.

The doctrine, as Judge Tatel in dissent pointed out, *American Trucking Associations v. EPA*, 175 F.3d 1027, 1057-58 (D.C. Cir. 1999) ("*ATA*") (Tatel, J., dissenting in

part), is at this stage of constitutional "evolution" not in particularly robust health. Justice Rehnquist heroically attempted to inject vitality into the doctrine in his powerful concurrence in the *Benzene* case, *see Industrial Union Dep't, AFL-CIO v. American Petroleum Inst.*, 448 U.S. 607, 671 (1980). But, sad to say, his view is not shared by a majority of the Court which has acknowledged only a theoretical limitation on the scope of congressional delegations to the executive branch. *See Mistretta v. United States*, 488 U.S. 361, 416 (1989) (Scalia, J., dissenting) ("What legislated standard, one must wonder, can possibly be too vague to survive judicial scrutiny, when we have repeatedly upheld, in various contexts, a 'public interest' standard?").

To be sure, the plurality in the *Benzene* case ostensibly relied on the doctrine to support its interpretation of the Occupational Safety and Health Act. *See Benzene*, 448 U.S. at 645-46. But a careful reading of the plurality opinion (not, of course, an opinion of the Court, which would bind us) reveals that the doctrine was only a makeweight, tossed into the analysis, in light of Justice Rehnquist's concurrence, to help justify the result. The plurality, disturbed at the seemingly draconian impact of the Secretary of Labor's standard as applied to several industries, analytically conflated the scope of the Secretary's discretion—the legitimate concern of the nondelegation doctrine—with the regulatory consequences of his interpretation of the statute. *Id.* at 645. The latter concern is not really germane to the doctrine; indeed, the Secretary was actually claiming he had *less* discretion than the plurality thought he had. Accordingly, the *Benzene* plurality opinion gives only lip service to the nondelegation doctrine; the boundaries limiting the scope of congressional delegation to the executive branch remain only

dimly perceivable. I agree with Judge Tatel that the terminology of this section of the Clean Air Act does not come so close to those boundaries to raise a serious constitutional problem.

If it did, and we were faced with two conflicting interpretations of the statute—both plausible—I have no doubt that a constitutionally dubious agency interpretation could be rejected even in a post-*Chevron* era. The majority questions that proposition—and confuses the issue—by stating that "the approach of the *Benzene* case . . . has given way to the approach of *Chevron*." Slip Op. on Reh'g at 4. The Supreme Court's opinion in *Rust v. Sullivan*, 500 U.S. 173, 191 (1991), is to the contrary. *See also infra* at 1 (Tatel, J., dissenting from denial of rehearing *en banc*) (citing *Mistretta*, 488 U.S. at 373 n.7). In other words, the constitutional avoidance canon trumps *Chevron* deference. But that principle is not relevant to this case. Even assuming the statute was problematic, the panel was not faced with two competing constructions, one of which might be thought to avoid constitutional difficulty. Indeed, the panel concluded that there are no intelligible principles "apparent from the statute" that brought EPA's discretion within constitutionally acceptable limits. *ATA*, 175 F.3d at 1034. If the panel believed that was so, it should have held the statute unconstitutional. Instead the panel, purporting to rely on *Chevron*, remanded to EPA directing that agency to come up with an artificially narrow interpretation with various suggestions offered by the panel to accomplish that end.[1] *Id.*

[1] Like the plurality opinion in *Benzene*, these suggestions seem more directed to encouraging wiser policy choices than interpreting the statute at issue.

at 1038-40. By so doing, I believe the panel undermines the purpose of the nondelegation doctrine.

That purpose is, of course, to ensure that *Congress* makes the crucial policy choices that are carried into law. The ability to make those policy choices (even if only at a broad level of generality) is what is meant by legislative power. *See* U.S. CONST. art. I, § 1 ("All legislative Powers herein granted shall be vested in a Congress of the United States."). It hardly serves—indeed, it contravenes—that purpose to demand that EPA in effect draft a different, narrower version of the Clean Air Act.[2] Under that view Congress would be able to delegate almost limitless policymaking authority to an agency, so long as the *agency* provides and consistently applies an "intelligible principle."[3]

That is not to say that EPA is totally free to exercise its authority at any point on the discretionary continuum that Congress delegated to it in the Clean Air Act. The Administrative Procedure Act's arbitrary and capricious

[2] The panel acknowledges this purpose but, relying on an old district court opinion as primary support, claims that its approach preserves two other rationales of the doctrine, limiting the ability of agencies to exercise delegated authority arbitrarily and providing meaningful standards for judicial review. *See ATA*, 175 F.3d at 1038 (citing *Amalgamated Meat Cutters v. Connally*, 337 F. Supp. 737, 758-59 (D.D.C. 1971)). But these "purposes" are obviously derivative of the doctrine's primary function of ensuring that *Congress* makes key policy decisions. It is, after all, only this so-called "third" purpose, *see id.*, that has any connection to the doctrine's constitutional source.

[3] It is true that we used a similar approach in *Industrial Union, UAW v. OSHA ("Lockout-Tagout I")*, 938 F.2d 1310 (D.C. Cir. 1991). Although one could distinguish that case, I think it rests on a similarly flawed analysis of the doctrine.

standard also limits the agency's actions. As we have observed, the broader the substantive statutory delegation the more likely that the agency's policy choices will be confined by the APA, rather than the substantive statute. *See National Ass'n of Regulatory Utility Com'rs v. ICC*, 41 F.3d 721, 727 (D.C. Cir. 1994) ("Whether an agency action is to be judged as reasonable, in accordance with the APA's general arbitrary and capricious standard, or whether it is to be examined as a permissible interpretation of the statute *vel non* depends, at least theoretically, on the scope of the specific congressional delegation implicated."). In that regard, I am quite uncertain whether EPA's regulatory choice meets that test. Judge Tatel's emphasis on the agency's extensive procedures does not appear to me to answer the question. It would not matter whether the agency "actually adhered to a disciplined decisionmaking process," *ATA*, 175 F.3d at 1059, if its final product was unreasonable. If we were to rehear the case, I would focus on that issue.

Doctrine aside, then, what is the practical difference between my approach and the panel's? The answer, I think, is that the panel engages—and by retaining jurisdiction promises to continue to engage, *see id.* at 1057—in a more searching review than the arbitrary and capricious standard would permit. By treating this case as a statutory interpretation question laden with constitutional implications the panel implicitly asserts a greater role for a reviewing court than is justified.

* * * *

I respectfully dissent from our denial of rehearing *en banc*.

TATEL, *Circuit Judge*, with whom EDWARDS, *Chief Judge*, and GARLAND, *Circuit Judge*, join, dissenting from the denial of rehearing *en banc*:

In explaining why they remain convinced that the Clean Air Act contains an unconstitutional delegation of legislative power, my colleagues merely repeat that EPA has failed to articulate a sufficiently limiting principle. *See* Slip Op. on Reh'g at 1-3. They then launch into a discussion of the proper remedy once a court encounters a problematic legislative delegation and conclude that "the approach of the *Benzene* case . . . has given way to the approach of *Chevron*." Slip Op. on Reh'g at 4. *But see supra* at 2-3 (Silberman, J., dissenting from the denial of rehearing *en banc*); *Mistretta v. United States*, 488 U.S. 361, 373 n.7 (1989) ("In recent years, our application of the nondelegation doctrine principally has been limited to the interpretation of statutory texts, and more particularly, to giving narrow constructions to statutory delegations that might otherwise be thought to be unconstitutional. *See, e.g.*, [the *Benzene* case.]").

The issues discussed by my colleagues have no relevance to the constitutional question we face. As I pointed out in my dissent, the Clean Air Act's requirement that EPA set air quality standards "requisite to protect the public health" with "an adequate margin of safety" based on criteria that "accurately reflect the latest scientific knowledge" is far more specific than the sweeping statutory delegations consistently upheld by the Supreme Court for more than sixty years. 42 U.S.C. § 7409(b)(1), § 7408(a)(2). *See, e.g.*, *National Broadcasting Co. v. United States*, 319 U.S. 190, 225-26 (1943) (upholding delegation to the FCC to regulate broadcast licensing in the "public interest"); *American*

Trucking Associations, Inc. v. EPA, 175 F.3d 1027, 1057-58 (D.C. Cir. 1999) (Tatel, J., dissenting in part) (collecting cases). In language particularly relevant to the highly technical and scientific process of setting national ambient air quality standards, the Supreme Court in *Mistretta* said this about the nondelegation doctrine: "[O]ur jurisprudence has been driven by a practical understanding that in our increasingly complex society, replete with ever changing and more technical problems, Congress simply cannot do its job absent an ability to delegate power under broad general directives." 488 U.S. at 372. Such extensive and unambiguous Supreme Court precedent is more than enough to sustain the Clean Air Act's delegation of authority to the EPA. For purposes of constitutional analysis, we thus have no need to require that EPA state "a far more determinate basis for decision" beyond the intelligible principle Congress provided in the Clean Air Act. *ATA*, 175 F.3d at 1037. Nor have we any reason to consider what remedies might be available were we faced with a statute that failed to meet constitutional standards. Unless petitioners can persuade the Supreme Court to return to the days of *Schechter Poultry*, this "inferior" court has no authority to demand anything more from either EPA or Congress.

Neither *American Lung Ass'n v. EPA*, 134 F.3d 388 (D.C. Cir. 1998), nor the *Benzene* case, both heavily relied upon by petitioners in their opposition to the suggestion for rehearing *en banc*, supports the panel's opinion. No one in *American Lung* doubted the constitutionality of section 109's directive that EPA establish NAAQS "requisite to protect the public health." Applying the familiar arbitrary and capricious standard, we held only that the Agency, in setting the sulfur dioxide NAAQS, had failed adequately to explain its

application of section 109. *See American Lung*, 134 F.3d at 392. The *Benzene* plurality stated nothing more than that section 3(8) of the OSHA statute implicitly requires the Agency to make a threshold finding that a substance to be regulated causes "significant risks of harm." 448 U.S. at 641. In support of this inference, the plurality pointed to the statute's structure, context, and legislative history, *see id.* at 642-45, adding that a broader reading "might" amount to an unconstitutional delegation, *id.* at 646. The conclusion that Congress *may* constitutionally delegate authority to OSHA to regulate "significant" risks of harm hardly supports the panel's holding that Congress *may not* constitutionally delegate authority to EPA to issue NAAQS "requisite" to protect the public health—a standard more restrictive than the one the Supreme Court derived and approved in the *Benzene* case.

The panel's nondelegation holding plainly "involves a question of exceptional importance" warranting *en banc* review. Fed. R. App. P. 35(a). Not only did the panel depart from a half century of Supreme Court separation-of-powers jurisprudence, but in doing so, it stripped the Environmental Protection Agency of much of its ability to implement the Clean Air Act, this nation's primary means of protecting the safety of the air breathed by hundreds of millions of people. *See* H.R. REP. NO. 101-490, pt. 1, at 144-45 (1990).

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 97-1440

AMERICAN TRUCKING ASSOCIATIONS, INC., ET AL.,
PETITIONERS

v.

UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY, RESPONDENT

COMMONWEALTH OF MASSACHUSETTS, ET AL.,
INTERVENORS

Consolidated with
Nos. 97-1546, 97-1548, 97-1551 to 97-1553,
97-1555, 97-1559, 97-1561, 97-1562, 97-1565, 97-1567,
97-1571, 97-1573, 97-1574, 97-1576, 97-1578, 97-1579,
97-1582, 97-1585 to 97-1588, 97-1592,
97-1594, 97-1596 to 97-1598

No. 97-1441

AMERICAN TRUCKING ASSOCIATIONS, INC., ET AL.,
PETITIONERS

v.

UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY, RESPONDENT

COMMONWEALTH OF MASSACHUSETTS, ET AL.,
INTERVENORS

Consolidated with
Nos. 97-1502, 97-1505, 97-1508 to 97-1510,
97-1512 to 97-1514, 97- 1518, 97-1519, 97-1526, 97-1531,
97-1539, 97-1566, 97-1568, 97-1570, 97-1572, 97-1575,
97-1584, 97-1589, 97-1591, 97-1595, 97-1619

[Filed October 29, 1999]

BEFORE: EDWARDS, *Chief Judge*; WALD, SILBERMAN, WILLIAMS, GINSBURG, SENTELLE, HENDERSON, RANDOLPH, ROGERS, TATEL and GARLAND, *Circuit Judges*.

ORDER

PER CURIAM

Upon consideration of the petitions for rehearing *en banc* of intervenors-respondents New Jersey and Massachusetts in Nos. 97-1440 and 97-1441, Citizens for Balanced Transportation, et al. in No. 97-1440 and the American Lung Association in Nos. 97-1440 and 97-1441, and the absence of a request by any member of the court for a vote, it is

ORDERED that the petitions be denied.

Circuit Judges WALD and HENDERSON did not participate in this matter.

APPENDIX C

Relevant Regulatory Provisions

National Ambient Air Quality Standards for Particulate Matter

The final rule revising the National Ambient Air Quality Standards for Particulate Matter provides:

Therefore, 40 CFR Chapter I is amended as follows:

PART 50—NATIONAL PRIMARY AND SECONDARY AMBIENT AIR QUALITY STANDARDS

* * *

4. Section 50.7 is added to read as follows:

§ 50.7 National primary and secondary ambient air quality standards for particulate matter.

(a) The national primary and secondary ambient air quality standards for particulate matter are:

(1) 15.0 micrograms per cubic meter ($\mu g/m^3$) annual arithmetic mean concentration, and 65 $\mu g/m^3$ 24-hour average concentration measured in the ambient air as $PM_{2.5}$ (particles with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers) by either.

(i) A reference method based on Appendix L of this part and designated in accordance with part 53 of this chapter; or

(ii) An equivalent method designated in accordance with part 53 of this chapter.

(2) 50 micrograms per cubic meter ($\mu g/m^3$) annual arithmetic mean concentration, and 150 $\mu g/m^3$ 24-hour average concentration measured in the ambient air as PM_{10} (particles with an aerodynamic diameter less than or equal to a nominal 10 micrometers) by either:

(i) A reference method based on Appendix M of this part and designated in accordance with part 53 of this chapter; or

(ii) An equivalent method designated in accordance with part 53 of this chapter.

(b) The annual primary and secondary $PM_{2.5}$ standards are met with the annual arithmetic mean concentration, as determined in accordance with Appendix N of this part, is less than or equal to 15.0 micrograms per cubic meter.

(c) The 24-hour primary and secondary $PM_{2.5}$ standards are met when the 98^{th} percentile 24-hour concentration, as determined in accordance with Appendix N of this part, is less than or equal to 65 micrograms per cubic meter.

(d) The annual primary and secondary PM_{10} standards are met when the annual arithmetic mean concentration, as determined in accordance with Appendix N of this part, is less than or equal to 50 micrograms per cubic meter.

(e) The 24-hour primary and secondary PM_{10} standards are met when the 99^{th} percentile 24-hour concentration, as determined in accordance with Appendix N of this part, is less than or equal to 150 micrograms per cubic meter.

* * *

62 Fed. Reg. 38652, 38711 (July 18, 1997).

National Ambient Air Quality Standards for Ozone

The final rule revising the National Ambient Air Quality Standards for Ozone provides:

Therefore, for the reasons set forth in the preamble, title 40, chapter I, part 50 of the Code of Federal Regulations is amended as follows:

PART 50—NATIONAL PRIMARY AND SECONDARY AMBIENT AIR QUALITY STANDARDS

* * *

2. Section 50.9 is revised to read as follows:

§ 50.9 National 1-hour primary and secondary ambient air quality standards for ozone.

(a) The level of the national 1-hour primary and secondary ambient air quality standards for ozone measured by a reference method based on Appendix D to this part and designated in accordance with part 53 of this chapter, is 0.12 parts per million (235 $\mu g/m^3$): The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 parts per million (235 $\mu g/m^3$) is equal to or less than 1, as determined by Appendix H to this part.

(b) The 1-hour standards set forth in this section will no longer apply to an area once EPA determines that the area has

air quality meeting the 1-hour standard. Area designations are codified in 40 CFR part 81.

3. Section 50.10 is added to read as follows:

§ 50.10 National 8-hour primary and secondary ambient air quality standards for ozone.

(a) The level of the national 8-hour primary and secondary ambient air quality standards for ozone, measured by a reference method based on Appendix D to this part and designated in accordance with part 53 of this chapter, is 0.08 parts per million (ppm), daily maximum 8-hour average.

(b) The 8-hour primary and secondary ozone ambient air quality standards are met at an ambient air quality monitoring site when the average of the annual fourth-highest daily maximum 8-hour average ozone concentration is less than or equal to 0.08 ppm, as determined in accordance with Appendix I to this part.

* * *

62 Fed. Reg. 38856, 38894 (July 18, 1997).

1-Hour Ozone Standard: Reinstatement

* * *

2. Section 50.9 is revised to read as follows:

§ 50.9 National 1-hour primary and secondary ambient air quality standards for ozone.

* * *

(b) The 1-hour standards set forth in this section will remain applicable to all areas notwithstanding the promulgation of 8-hour ozone standards under section 50.10. In addition, after the 8-hour standard has become fully enforceable under part D of title I of the CAA and subject to no further legal challenge, the 1-hour standards set forth in this section will no longer apply to an area once EPA determines that the area has air quality meeting the 1-hour standard. Area designations and classifications with respect to the 1-hour standards are codified in 40 CFR part 81.

* * *

1-Hour Ozone Standard: Reinstatement: Final Rule (visited July 19, 2000) <http://www.epa.gov/ttn/oarpg/t1/fr_notices/rein18ss8.pdf>.

APPENDIX D

Relevant Statutory Provisions

Excerpt from Section 101 of the Clean Air Act

§ 7401. Congressional findings and declaration of purpose

* * *

(b) Declaration

The purposes of this subchapter are–

(1) to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population;

* * *

* * *

Excerpt from Section 108 of the Clean Air Act

§ 7408. Air quality criteria and control techniques

(a) Air pollutant list; publication and revision by Administrator; issuance of air quality criteria for air pollutants

(1) For the purpose of establishing national primary and secondary ambient air quality standards, the Administrator shall within 30 days after December 31, 1970,

publish, and shall from time to time thereafter revise, a list which includes each air pollutant–

(A) emissions of which, in his judgment, cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare;

(B) the presence of which in the ambient air results from numerous or diverse mobile or stationary sources; and

(C) for which air quality criteria had not been issued before December 31, 1970 but for which he plans to issue air quality criteria under this section.

(2) The Administrator shall issue air quality criteria for an air pollutant within 12 months after he has included such pollutant in a list under paragraph (1). Air quality criteria for an air pollutant shall accurately reflect the latest scientific knowledge useful in indicating the kind and extent of all identifiable effects on public health or welfare which may be expected from the presence of such pollutant in the ambient air, in varying quantities. The criteria for an air pollutant, to the extent practicable, shall include information on–

(A) those variable factors (including atmospheric conditions) which of themselves or in combination with other factors may alter the effects on public health or welfare of such air pollutant;

(B) the types of air pollutants which, when present in the atmosphere, may interact with such pollutant to produce an adverse effect on public health or welfare; and

(C) any known or anticipated adverse effects on welfare.

(b) Issuance by Administrator of information on air pollution control techniques; standing consulting committees for air pollutants; establishment; membership

(1) Simultaneously with the issuance of criteria under subsection (a) of this section, the Administrator shall, after consultation with appropriate advisory committees and Federal departments and agencies, issue to the States and appropriate air pollution control agencies information on air pollution control techniques, which information shall include data relating to the cost of installation and operation, energy requirements, emission reduction benefits, and environmental impact of the emission control technology. Such information shall include such data as are available on available technology and alternative methods of prevention and control of air pollution. Such information shall also include data on alternative fuels, processes, and operating methods which will result in elimination or significant reduction of emissions.

(2) In order to assist in the development of information on pollution control techniques, the Administrator may establish a standing consulting committee for each air pollutant included in a list published pursuant to subsection (a)(1) of this section, which shall be comprised of technically qualified individuals representative of State and local governments, industry, and the academic community. Each such committee shall submit, as appropriate, to the

Administrator information related to that required by paragraph (1).

(c) Review, modification, and reissuance of criteria or information

The Administrator shall from time to time review, and, as appropriate, modify, and reissue any criteria or information on control techniques issued pursuant to this section.

* * *

Excerpt from Section 109 of the Clean Air Act

§ 7409. National primary and secondary ambient air quality standards

(a) Promulgation

(1) The Administrator–

(A) within 30 days after December 31, 1970, shall publish proposed regulations prescribing a national primary ambient air quality standard and a national secondary ambient air quality standard for each air pollutant for which air quality criteria have been issued prior to such date; and

(B) after a reasonable time for interested persons to submit written comments thereon (but no later than 90 days after the initial publication of such proposed standards) shall by regulation promulgate such proposed national primary and secondary ambient air quality

standards with such modifications as he deems appropriate.

(2) With respect to any air pollutant for which air quality criteria are issued after December 31, 1970, the Administrator shall publish, simultaneously with the issuance of such criteria and information, proposed national primary and secondary ambient air quality standards for any such pollutant. The procedure provided for in paragraph (1)(B) of this subsection shall apply to the promulgation of such standards.

(b) Protection of public health and welfare

(1) National primary ambient air quality standards, prescribed under subsection (a) of this section shall be ambient air quality standards the attainment and maintenance of which in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health. Such primary standards may be revised in the same manner as promulgated.

(2) Any national secondary ambient air quality standard prescribed under subsection (a) of this section shall specify a level of air quality the attainment and maintenance of which in the judgment of the Administrator, based on such criteria, is requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air. Such secondary standards may be revised in the same manner as promulgated.

* * *

(d) Review and revision of criteria and standards; independent scientific review committee; appointment; advisory functions

(1) Not later than December 31, 1980, and at five-year intervals thereafter, the Administrator shall complete a thorough review of the criteria published under section 7408 of this title and the national ambient air quality standards promulgated under this section and shall make such revisions in such criteria and standards and promulgate such new standards as may be appropriate in accordance with section 7408 of this title and subsection (b) of this section. The Administrator may review and revise criteria or promulgate new standards earlier or more frequently than required under this paragraph.

(2)(A) The Administrator shall appoint an independent scientific review committee composed of seven members including at least one member of the National Academy of Sciences, one physician, and one person representing State air pollution control agencies.

(B) No later than January 1, 1980, and at five-year intervals thereafter, the committee referred to in subparagraph (A) shall complete a review of the criteria published under section 7408 of this title and the national primary and secondary ambient air quality standards promulgated under this section and shall recommend to the Administrator any new national ambient air quality standards and revisions of existing criteria and standards as may be appropriate under section 7408 of this title and subsection (b) of this section.

(C) Such committee shall also (i) advise the Administrator of areas in which additional knowledge is required to appraise the adequacy and basis of existing, new, or revised national ambient air quality standards, (ii) describe the research efforts necessary to provide the required information, (iii) advise the Administrator on the relative contribution to air pollution concentrations of natural as well as anthropogenic activity, and (iv) advise the Administrator of any adverse public health, welfare, social, economic, or energy effects which may result from various strategies for attainment and maintenance of such national ambient air quality standards.

* * *

Excerpt from The Transportation Equity Act for the 21st Century

Title VI--Ozone And Particulate Matter Standards

§ 6101. Findings And Purpose

(a) The Congress finds that--

(1) there is a lack of air quality monitoring data for fine particle levels, measured as PM2.5, in the United States and the States should receive full funding for the monitoring efforts;

(2) such data would provide a basis for designating areas as attainment or nonattainment for any PM2.5 national ambient air quality standards pursuant to the standards promulgated in July 1997;

(3) the President of the United States directed the Administrator of the Environmental Protection Agency (referred to in this title as the "Administrator") in a memorandum dated July 16, 1997, to complete the next periodic review of the particulate matter national ambient air quality standards by July 2002 in order to determine "whether to revise or maintain the standards";

(4) the Administrator has stated that 3 years of air quality monitoring data for fine particle levels, measured as PM2.5 and performed in accordance with any applicable Federal reference methods, is appropriate for designating areas as attainment or nonattainment pursuant to the July 1997 promulgated standards; and

(5) the Administrator has acknowledged that in drawing boundaries for attainment and nonattainment areas for the July 1997 ozone national air quality standards, Governors would benefit from considering implementation guidance from EPA on drawing area boundaries.

(b) The purposes of this title are--

(1) to ensure that 3 years of air quality monitoring data regarding fine particle levels are gathered for use in the determination of area attainment or nonattainment designations respecting any PM2.5 national ambient air quality standards;

(2) to ensure that the Governors have adequate time to consider implementation guidance from EPA on drawing area boundaries prior to submitting area designations respecting the July 1997 ozone national ambient air quality standards;

(3) to ensure that the schedule for implementation of the July 1997 revisions of the ambient air quality standards for particulate matter and the schedule for the Environmental Protection Agency's visibility regulations related to regional haze are consistent with the timetable for implementation of such particulate matter standards as set forth in the President's Implementation Memorandum dated July 16, 1997.

§ 6102. Particulate Matter Monitoring Program.

(a) Through grants under section 103 of the Clean Air Act the Administrator of the Environmental Protection Agency shall use appropriated funds no later than fiscal year 2000 to fund 100 percent of the cost of the establishment, purchase, operation and maintenance of a PM2.5 monitoring network necessary to implement the national ambient air quality standards for PM2.5 under section 109 of the Clean Air Act. This implementation shall not result in a diversion or reprogramming of funds from other Federal, State or local Clean Air Act activities. Any funds previously diverted or reprogrammed from section 105 Clean Air Act grants for PM2.5 monitors must be restored to State or local air programs in fiscal year 1999.

(b) EPA and the States, consistent with their respective authorities under the Clean Air Act, shall ensure that the national network (designated in subsection (a)) which consists of the PM2.5 monitors necessary to implement the national ambient air quality standards is established by December 31, 1999.

(c)(1) The Governors shall be required to submit designations referred to in section 107(d)(1) of the Clean Air Act for each

area following promulgation of the July 1997 PM2.5 national ambient air quality standard within 1 year after receipt of 3 years of air quality monitoring data performed in accordance with any applicable Federal reference methods for the relevant areas. Only data from the monitoring network designated in subsection (a) and other Federal reference method PM2.5 monitors shall be considered for such designations. Nothing in the previous sentence shall be construed as affecting the Governor's authority to designate an area initially as nonattainment, and the Administrator's authority to promulgate the designation of an area as nonattainment, under section 107(d)(1) of the Clean Air Act, based on its contribution to ambient air quality in a nearby nonattainment area.

(2) For any area designated as nonattainment for the July 1997 PM2.5 national ambient air quality standard in accordance with the schedule set forth in this section, notwithstanding the time limit prescribed in paragraph (2) of section 169B(e) of the Clean Air Act, the Administrator shall require State implementation plan revisions referred to in such paragraph (2) to be submitted at the same time as State implementation plan revisions referred to in section 172 of the Clean Air Act implementing the revised national ambient air quality standard for fine particulate matter are required to be submitted. For any area designated as attainment or unclassifiable for such standard, the Administrator shall require the State implementation plan revisions referred to in such paragraph (2) to be submitted 1 year after the area has been so designated. The preceding provisions of this paragraph shall not preclude the implementation of the agreements and recommendations set forth in the Grand

Canyon Visibility Transport Commission Report dated June 1996.

(d) The Administrator shall promulgate the designations referred to in section 107(d)(1) of the Clean Air Act for each area following promulgation of the July 1997 PM2.5 national ambient air quality standard by the earlier of 1 year after the initial designations required under subsection (c)(1) are required to be submitted or December 31, 2005.

(e) The Administrator shall conduct a field study of the ability of the PM2.5 Federal Reference Method to differentiate those particles that are larger than 2.5 micrograms in diameter. This study shall be completed and provided to the Committee on Commerce of the House of Representatives and the Committee on Environment and Public Works of the United States Senate no later than 2 years from the date of enactment of this Act.